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DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

CHARLES D. WALCOTT, DIRECTOR

BIBLIOGRAPHY AND INDEX

OF

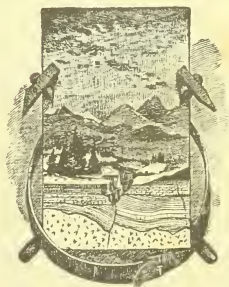
NORTH AMERICAN GEOLOGY, PALEONTOLOGY,
PETROLOGY, AND MINERALOGY

FOR

THE YEAR 1903

BY

FRED BOUGHTON WEEKS



WASHINGTON
GOVERNMENT PRINTING OFFICE
1904

CONTENTS.

	Page.
Letter of transmittal.....	5
Introduction.....	7
List of publications examined.....	9
Bibliography.....	13
Addenda to bibliographies for previous years.....	139
Classified key to the index.....	141
Index.....	149

LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,

UNITED STATES GEOLOGICAL SURVEY,

Washington, D. C., June 7, 1904.

SIR: I have the honor to transmit herewith the manuscript of a bibliography and index of North American geology, paleontology, petrology, and mineralogy for the year 1903, and to request that it be published as a bulletin of the Survey.

Very respectfully,

F. B. WEEKS,
Librarian.

Hon. CHARLES D. WALCOTT,
Director United States Geological Survey.

BIBLIOGRAPHY AND INDEX OF NORTH AMERICAN GEOLOGY, PALEONTOLOGY, PETROLOGY, AND MINERALOGY FOR THE YEAR 1903.

By FRED BOUGHTON WEEKS.

INTRODUCTION.

The arrangement of the material of the Bibliography and Index for 1903 is similar to that adopted for the preceding annual bibliographies, Bulletins Nos. 130, 135, 146, 149, 156, 162, 172 (combined in Bulletins 188 and 189), 203, and 221.

Bibliography.—The bibliography consists of full titles of separate papers, arranged alphabetically by authors' names, an abbreviated reference to the publication in which the paper is printed, and a brief description of the contents, each paper being numbered for index reference.

Index.—The subject headings, their subdivisions and arrangement, are shown in the classified key to the index, which immediately precedes the index. Reference is made in each entry by author's name and number of article in the bibliography.

The series of annual bibliographies has been prepared solely from publications received by the library of the United States Geological Survey. On January 1, 1903, the writer was placed in charge of the library of this organization, and an effort has since been made to procure the publications which were not noticed in the bibliographies of previous years, it being known that there were a considerable number of omissions of geological papers. Many of these are noted in this bulletin.

Mr. John M. Nickles has again assisted in the compilation of this work, and credit is due him for its careful preparation and completeness.

LIST OF PUBLICATIONS EXAMINED.

- Alabama Geological Survey: Bulletin no. 7, 1903. Montgomery, Ala.
- American Academy of Arts and Sciences: Proceedings, vol. 38, nos. 16-25; vol. 39, nos. 1-12, 1903. Boston, Mass.
- American Geographical Society: Bulletin, vol. 35, 1903. New York, N. Y.
- American Geologist, vols. 31 and 32, 1903. Minneapolis, Minn.
- American Institute of Mining Engineers: Transactions, vol. 33, 1903, and advance papers of 1903 meetings. New York, N. Y.
- American Journal of Science: 4th ser., vols. 15 and 16, 1903. New Haven, Conn.
- American Museum of Natural History: Bulletin, vol. 19, 1903; Memoirs, vol. 1, pt. 8, 1903; Journal, vol. 3 and supplements, 1903. New York, N. Y.
- American Naturalist, vol. 37, 1903. Boston, Mass.
- American Paleontology: Bulletins nos. 16-18, 1903. Ithaca, N. Y.
- American Philosophical Society: Proceedings, vol. 42, nos. 172-174, 1903. Philadelphia, Pa.
- Annales des Mines: Mémoires, 6th ser., tomes 3 and 4, 1903. Paris, France.
- Annals and Magazine of Natural History, 7th ser., vols. 11 and 12, 1903. London, England.
- Appalachia, vol. 10, no. 2, 1903. Boston, Mass.
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- Boston Society of Natural History: Proceedings, vol. 31, nos. 1-6, 1903. Boston, Mass.
- Botanical Gazette, vols. 35 and 36, 1903. Chicago, Ill.
- Buffalo Society of Natural Sciences: Bulletin, vol. 8, nos. 1-3, 1903.
- California Academy of Sciences: Memoirs, vol. 3, 1903. San Francisco, Cal.
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- Canada Geological Survey: Summary Report for 1902; Report on Cambrian Rocks of Cape Breton; Mesozoic Fossils, vol. 1, pt. 5, 1903. Ottawa, Canada.
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- Centralblatt für Mineralogie, Geologie und Palaeontologie, nos. 1-24, 1903. Stuttgart, Germany.
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- Elisha Mitchell Scientific Society: Journal, vol. 18, pt. 2; vol. 19, pts. 1 and 2, 1903. Chapelhill, N. C.
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- Geographical Journal, vols. 31 and 32, 1903. London, England.
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- 2 **Adams** (Frank D.). Memoir of George M. Dawson.
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- 3 — The Monteregian Hills—a Canadian petrographical province.
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Geol., Papers, no. 14, 1903.
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the elevations in the Province of Quebec for which the term Monte-
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position, and classification of the rocks composing Mount Johnson, and
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- 4 **Adams** (George I.). Physiographic divisions of Kansas.
Kans. Acad. Sci., Trans., vol. 18, pp. 109-123, 4 figs., 1903.
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features.
- 5 — Principles controlling the geologic deposition of the hydro-
carbons.
Am. Inst. Mg. Engrs., Trans., vol. 33, pp. 340-347, 1903.
- 6 — Stratigraphic relations of the Red Beds to the Carboniferous
and Permian in northern Texas.
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Red Beds of Texas, Oklahoma, Indian Territory, and Kansas, and dis-
cusses their relationships.
- 7 — Zinc and lead deposits of northern Arkansas.
U. S. Geol. Surv., Bull. no. 213, pp. 187-196, 1903.
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logic structure of the field, and describes the occurrence, character, and
source of the ores.
- 8 — Zinc and lead deposits of northern Arkansas.
Am. Inst. Mg. Engrs., Trans. (Albany meeting, February, 1903). 12
pp.
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and lead ore deposits, and discusses their classification and origin.

- 9 **Adams** (George I.). Origin of bedded breccias in northern Arkansas.
Abstract: Science, new ser., vol. 17, pp. 792-793, 1903.
- 10 — **Girty** (George H.), and **White** (David). Stratigraphy and paleontology of the Upper Carboniferous rocks of the Kansas section.
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Comprises a review of previous work upon the stratigraphy, and a description in detail of the geologic formations, including definition and synonymy, character and extent, and faunal lists of the Upper Carboniferous strata of Kansas and northern Indian Territory, by George I. Adams; a discussion and tabulation of the invertebrate fossils, by George H. Girty, and an annotated list of the fossil plants recorded from the Upper Carboniferous and Permian formations of Kansas, by David White.
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Describes the geology of the Coal Measures of the bituminous coal regions of Pennsylvania.
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Mg. & Sci. Press, vol. 87, p. 402, 1 fig., 1903.
Describes briefly the general geology and the occurrence of the silver-lead ores.
- 13 **Alden** (William C.). The stone industry in the vicinity of Chicago, Ill.
U. S. Geol. Surv., Bull. no. 213, pp. 357-360, 1903.
Describes the occurrence and utilization of limestone, sand, and gravel in the vicinity of Chicago, Ill.
- 14 — **Fuller** (Myron L.) and. Elkland-Tioga folio, Pennsylvania.
See Fuller (M. L.) and Alden (W. C.), 424.
- 15 — **Fuller** (Myron L.) and. Gaines folio, Pennsylvania-New York.
See Fuller (M. L.) and Alden (W. C.), 423.
- 16 **Aldrich** (Truman H.). New species of Tertiary fossils from Alabama, Mississippi, and Florida.
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- 17 — A new *Conus* from the Tertiary of Florida.
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- 18 — Two new species of Eocene fossils from the Lignitic of Alabama.
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- 19 — **Smith** (Eugene A.) and. The Grand Gulf formation.
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- 20 **Ami** (Henry M.). Bibliography of Canadian geology and paleontology for the year 1901.
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- 21 ——— Bibliography of Dr. George M. Dawson.
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- 22 ——— Paleontology and chronological geology.
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Nova Scotian Inst. Sci., Proc. & Trans., vol. 10, pp. 447-450, 1903.
- 24 ——— Sketch of the life and work of the late Dr. A. R. C. Selwyn, C. M. G., LL. D., F. R. S., F. G. S., etc., Director of the Geological Survey of Canada from 1869 to 1894.
Am. Geol., vol. 31, pp. 1-21, 1 pl. (por.), 1903.
- 25 ——— Ordovician succession in eastern Ontario.
Abstract: Geol. Soc. Am., Bull., vol. 13, pp. 517-518, 1903.
Presents a list of the formations and gives their lithologic characters.
- 26 ——— Meso-Carboniferous age of the Union and Riversdale formations, Nova Scotia.
Abstract: Geol. Soc. Am., Bull., vol. 13, pp. 533-535, 1903.
Contains additional data on the age and relations of these formations.
- 27 ——— The first Eparchæan formation.
Abstract: Science, new ser., vol. 17, p. 290, 1903.
- 28 ——— See Adams (F. D.), 2.
- 29 **Anderson** (Frank M.). Physiography and geology of the Siskiyou Range.
Abstract: Eng. & Mg. Jour., vol. 75, p. 154, 1903; Jour. Geol., vol. 11, p. 100, 1903.
- 30 **Anderson** (Tempest). Characteristics of recent volcanic eruptions.
Nature, vol. 67, p. 308, 1903.
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- 31 ——— Recent volcanic eruptions in the West Indies.
Geog. Jour., vol. 31, pp. 265-279, 13 pls., 1903; Yorkshire Phil. Soc., Ann. Rept. for 1903.
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- 32 **Anderson** (Tempest) and **Flett** (John S.). Preliminary report on the recent eruption of the Soufrière in St. Vincent, and of a visit to Mont Pelée, in Martinique.
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Nat. Geog. Mag., vol. 14, pp. 441-445, ill., 1903.
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- 36 **Argall** (Philip). Notes on the Santa Eulalia mining district, Chihuahua, Mexico.
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- 37 — The Santa Eulalia [Mexico] ore deposits.
Eng. & Mg. Jour., vol. 76, pp. 350-351, ill., 1903.
Describes the general geology, the igneous intrusions, the occurrence and character of the silver-lead ores, and discusses their origin.
- 38 **Arnold** (Ralph). The paleontology and stratigraphy of the marine Pliocene and Pleistocene of San Pedro, California.
Cal. Acad. Sci., Mem., vol. 3, pp. 1-420, pls. 1-37, 1903; Leland Stanford jr. Univ., Cont. to Biol. from the Hopkins Seaside Laboratory, 31, pp. 1-420, pls. 1-37, 1903.
Describes the topography and the character and occurrence of Tertiary and Quaternary formations of California bordering the Pacific, and gives lists of fossils by formations showing geographical distribution and relations to existing faunas, and systematic descriptions of the genera and species. Includes descriptions of several new species of corals by T. Wayland Vaughan and of mollusca by W. H. Dall.
- 39 **Arreola** (José Maria). The recent eruptions of Colima [Mexico].
Jour. Geol., vol. 11, pp. 749-761, figs. 1-8, 1903.
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- 40 **Ashley** (George Hall). The geology of the Lower Carboniferous area of southern Indiana.

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Describes physiographic and drainage features, the stratigraphy, character, occurrence and geologic relations of Lower Carboniferous formations and economic resources of this area.

- 41 — **Fuller** (Myron L.) and. Recent work in the coal field of Indiana and Illinois.

See Fuller (M. L.) and Ashley (G. H.), 425.

- 42 **Austin** (W. L.). Some tellurium veins in La Plata Mountains [Colorado].

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Describes the occurrence and character of the veins, and the character of the country rock.

- 43 — Some New Mexico copper deposits.

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- 44 — The ore deposits of Cananea [Mexico].

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- 45 — [In discussion of paper by Walter Harvey Weed, "Ore-deposits near igneous contacts."]

Am. Inst. Mg. Engrs., Trans., vol. 33, pp. 1070-1077, 1903.

Describes occurrences of some ore deposits and their bearing upon the paper discussed.

- 46 — [In discussion of paper by Waldemar Lindgren, "The geological features of the gold production of North America."]

Am. Inst. Mg. Engrs., Trans., vol. 33, pp. 1079-1081, 1903.

Calls attention to the occurrence of a gold deposit of supposed Cambrian age in Colorado.

B.

- 47 **Bache** (Franklin). The Arkansas-Indian Territory coal-field.

Eng. & Mg. Jour., vol. 76, pp. 390-392, ill., 1903.

Describes the location and extent of the field, the character and occurrence of the coal seams, and the mining developments.

- 48 **Bagg** (Rufus M., jr.). The genesis of ore deposits in Boulder County, Colorado.

Abstract: Eng. & Mg. Jour., vol. 75, p. 154, 1903; Jour. Geol., vol. 11, p. 100, 1903.

- 49 — The veins of Boulder County, Colorado.

Eng. & Mg. Jour., vol. 75, p. 334, 1903.

Discusses the occurrence and the origin of the ore deposits.

- 50 **Bailey** (Edgar H. S.). Special report on mineral waters [Kansas].
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- 51 **Bailey** (J. Trowbridge). The ore deposits of Contact, Nevada.
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- 154 — **Mooney** (Charles N.) and. Soil survey of the Prince Edward area, Virginia.
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- 155 — **Mooney** (Charles N.), Martin (J. O.) and. Soil survey of the Bedford area, Virginia.
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- 390 — Meteorites of northwestern Kansas.
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- 405 — **Anderson** (Tempest) and. Report on the eruptions of the the Soufrière, in St. Vincent, in 1902, and on a visit to Montagne Pelée, in Martinique.
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- 609 — Martinique and St. Vincent revisited.

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Science, new ser., vol. 17, p. 1010, 1903.

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- 611 — Mont Pelé from May to October, 1903.

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- 620 **Howley** (James P.). Report of geological exploration in the district of White Bay, N. F., during the season of 1902.
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- 644 — **Gardner** (Frank D.) and. Soil survey in the Sevier Valley,
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- 645 **Jensen** (Charles A.), **Gardner** (Frank D.) and. Soil survey in Weber County, Utah.
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- 646 **Johnson** (Douglas Wilson). Geology of the Cerrillos Hills, New Mexico. Part I. General geology.
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- 651 **Johnson** (J. E., jr.). Origin of the Oriskany limonites [Virginia].
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- 654 **Jones** (Grove B.), **Bennett** (Frank, jr.) and. Soil survey of the Brazoria area, Texas.
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- 656 **Julien** (Alexis A.). Genesis of the amphibole schists and serpentines of Manhattan Island, New York.

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- 659 — Cranberry folio, North Carolina-Tennessee.

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- 660 — Iron-ore deposits of the Cranberry district, North Carolina-Tennessee.

U. S. Geol. Surv., Bull. no. 213, pp. 243-246, 1903.

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- 661 — Tennessee marbles.

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- 662 — Tale deposits of North Carolina.

U. S. Geol. Surv., Bull. no. 213, pp. 433-438, 1903.

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- 663 **Kemp** (James Furman). The anthracite situation and problem.

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- 851 — The practical working of the quantitative classification.
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- 852 — See Merrill (G. P.), 890.
- 853 **Mathez** (Auguste). Geology of the Cananeas [Mexico].
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- 878 — A Carboniferous section in the upper Copper River Valley, Alaska.
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- 889 — John Wesley Powell.

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- 896 ——— **Heileman** (W. H.) and. Soil survey of the Lake Charles area, Louisiana.
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- 897 ——— **Holmes** (J. Garnett) and. Soil survey of the Ventura area, California.
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- 907 — Iron ranges of northern Ontario.

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- 908 — [In discussion of paper by Waldemar Lindgren, "The geological features of the gold production of North America."]

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- 910 — The delta-plain at Andover, Mass.

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- 913 **Moissan** (Henri). Sur la présence de l'argon, de l'oxyde de carbone et des carbures d'hydrogène dans les gaz des fumeroles du Mont Pelé à la Martinique.

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- 921 **Moudy** (R. B.), **Slosson** (E. E.) and. The Laramie cement plaster.
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- 926 — **Jensen** (Charles A.) and. Soil survey of the Grand Forks area, North Dakota.
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- 937 **Olshausen** (B. A.), **Lapham** (J. E.) and. Soil survey of the Wichita area, Kansas.

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- 939 — **Jensen** (Charles A.) and. Soil survey of the Yakima area, Washington.

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- 940 **Olsson-Seffer** (Pehr). Examination of organic remains in post-Glacial deposits.

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- 943 — Los volcanes de Zacapu, Michoacan [Mexico].

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- 944 — Les dernières éruptions du volcan de Colima [Mexico].

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- 952 — Evolution of the Proboscidea in North America.
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- 953 — On recent models and restorations of a number of extinct animals, with a discussion of their probable habits and mode of life.
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- 972 **Pirsson** (Louis V.) and others. Quantitative classification of igneous rocks.
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- 973 **Poole** (Henry S.). Notes on Dr. Ami's paper on Dictyonema slates of Angus Brook, New Canaan, and Kentville, N. S.
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- 976 — A submerged tributary to the great pre-Glacial river of the Gulf of St. Lawrence.
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- 982 **Prosser** (Charles S.). The nomenclature of the Ohio geological formations.

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- 983 — Notes on the geology of eastern New York.

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- 984 **Purdue** (A. H.). The saddle-back topography of the Boone chert region, Arkansas.

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- 990 — Geology of the Virginus mine [Colorado].
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- 993 — The copper deposits of Bisbee, Arizona.
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- 994 — The geology and copper deposits of Bisbee, Arizona.
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- 995 — Genetic classification of ore deposits.
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- 996 **Ravn** (J. P. J.). The Tertiary fauna at Kap Dalton in East Greenland.
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- 999 **Raymond** (William J.). Writings of James G. Cooper, M. D., on conchology and paleontology, with list of species described by him.
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- 1001 — Nodular-bearing schists near Pearl, Colorado.
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- 1002 **Reade** (T. Mellard). The evolution of earth structure, with a theory of geomorphic changes.
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- 1004 — Age of the lavas of the plateau region [New Mexico and Arizona].
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- 1005 — Geology of the Fort Apache region in Arizona.
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- 1006 — The Jemez coal fields [New Mexico].
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- 1009 — The variation of glaciers VIII.
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- 1011 — Notes on Mounts Hood and Adams and their glaciers.
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- 1013 — **Fippin** (Elmer O.) and. Soil survey of Allegan County, Michigan.
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- 1014 — **Taylor** (F. W.) and. Soil survey of the Abbeville area, South Carolina.
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- 1017 **Rickard** (T. A.). Across the San Juan Mountains.
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- 1018 **Rickard** (T. A.). The lodes of Cripple Creek [Colorado].
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- 1019 — Water in veins—a theory.
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- 1023 — Genetic classification of ore deposits.
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U. S. Geol. Surv., Bull. no. 213, pp. 163-169, 1903.
Gives a brief account of the geography and geology of this region and describes the mining developments.
- 1151 — Manganese deposits of Santiago, Cuba.
U. S. Geol. Surv., Bull. no. 213, pp. 251-255, 1903.
Describes briefly the geologic structure of the region and the occurrence and probable output of manganese ores.
- 1152 **Spencer** (Joseph William Winthrop). On the geological relationship of the volcanoes of the West Indies.
Victoria Inst., Jour. Trans., vol. 35, pp. 198-207, 1 fig., 1903.
Discusses physiographic features and changes of the West Indies islands and the submerged plateau upon which they rest, the place of their igneous formations in geologic history and the evidences of the geologic age of the volcanic activity and its relations to physical changes in the Antillean region.
- 1153 — Geological age of the West Indian volcanic formations.
Am. Geol., vol. 31, pp. 48-51, 1 fig., 1903.
Discusses the geologic history of the region.
- 1154 — Submarine valleys off the American coast and in the North Atlantic.
Geol. Soc. Am., Bull., vol. 14, pp. 207-226, pls. 19-20, figs. 1-2, 1903.
Describes the submerged Atlantic coastal plain from Cape Hatteras to Newfoundland and the channels traversing it, discusses geological data and evidences of the age of the submerged valleys and describes submerged valleys of the North Atlantic and adjacent Arctic basins.
- 1155 **Spurr** (Josiah Edward). Descriptive geology of Nevada south of the Fortieth Parallel and adjacent portions of California.
U. S. Geol. Surv., Bull. no. 208, 229 pp., 8 pls., 25 figs., 1903.
Describes physiographic features, character and occurrence of sedimentary and igneous rocks and ore deposits and structure of the region, including résumé of previous publications and unpublished data furnished by C. D. Walcott, H. W. Turner, F. B. Weeks, R. B. Rowe, G. H. Girty, and E. O. Ulrich.
- 1156 — The determination of the feldspars in thin section.
Am. Geol., vol. 31, pp. 376-383, 1903.
- 1157 — Ore deposits of Tonopah and neighboring districts, Nevada.
U. S. Geol. Surv., Bull. no. 213, pp. 81-87, 1903.
Describes the history of the development of the field, the topography, general geology, and character and occurrence of the ore deposits.

- 1158 **Spurr** (Josiah Edward). The ore deposits of Tonopah, Nevada (preliminary report).

U. S. Geol. Surv., Bull. no. 219, 34 pp., pl. 1, figs. 1-4, 1903.

Gives a brief history of the discovery and development of this mining district, and describes the geologic structure and history of the region, the periods and nature of mineralization, and the occurrence of the ores and their relation to the geologic structure.

- 1159 — Relation of rock segregation to ore deposition.

Eng. & Mg. Jour., vol. 76, pp. 54-55, 1903.

Discusses the origin of ore deposits.

- 1160 — The ore deposits of Tonopah, Nevada.

Eng. & Mg. Jour., vol. 76, pp. 769-770, ill., 1903.

Describes the geologic structure of the region and the occurrence of the ore deposits of precious metals.

- 1161 — A consideration of igneous rocks and their segregation or differentiation as related to the occurrence of ores.

Am. Inst. Mg. Engrs., Trans., vol. 33, pp. 288-340, 1903.

Discusses the relations of igneous rocks and ore deposits, and the origin of the latter.

- 1162 — [In discussion of paper by Waldemar Lindgren, "The geological features of the gold production of North America."]

Am. Inst. Mg. Engrs., Trans., vol. 33, pp. 1081-1083, 1903.

Discusses the age of certain gold deposits in Alaska.

- 1163 — The application of geology to mining.

Intern. Mg. Cong., Proc. 5th sess., pp. 80-86 [1903].

- 1164 — [Genetic classification of ore deposits.]

Abstract: Science, new ser., vol. 17, p. 274, 1903.

- 1165 — The relation of faults to topography.

Abstract: Science, new ser., vol. 17, p. 792, 1903.

- 1166 **Stanton** (Timothy W.). A new fresh-water molluscan faunule from the Cretaceous of Montana.

Am. Phil. Soc., Proc., vol. 42, pp. 188-199, pl. 4, 1903.

Discusses the stratigraphic horizon of this faunule, and the occurrence of Cretaceous formations and their correlation, and describes six new species of fresh-water mollusks.

- 1167 — **Alpheus Hyatt**.

Washington Acad. Sci., Proc., vol. 5, pp. 389-391, 1903

- 1168 — See Diller (J. S.), 302.

- 1169 — See Hyatt (Alpheus), 625.

- 1170 — See Washburne (Chester), 1265.

- 1171 **Starbird** (H. B.). Secondary enrichment in arid regions.

Eng. & Mg. Jour., vol. 75, pp. 702-703, 1903.

Describes occurrence and origin of gold and copper ores.

- 1172 **Stead** (Geoffrey). Notes on the surface geology of New Brunswick.
New Brunswick Nat. Hist. Soc., Bull. no. 21 (vol. 5, pt. 1), pp. 5-13, 1903.
Describes the process of formation of shore deposits along the coast of New Brunswick.
- 1173 **Steel** (A. A.). The ore deposits of La Cananea [Mexico].
Eng. & Mg. Jour., vol. 76, pp. 458-460, ill., 1903.
Gives observations upon the geology and the character and occurrence of the copper ore deposits.
- 1174 **Steele** (James H.). The Joplin zinc district of southwestern Missouri.
Colo. Sch. Mines, Bull., vol. 1, pp. 43-50, ill., 1900.
Gives observations upon the geology and describes the occurrence of the ores and the mining operations.
- 1175 **Sternberg** (Charles H.). Experiences with early man in America.
Kans. Acad. Sci., Trans., vol. 18, pp. 89-93, 1903.
Describes association of human relics with fossil bones of animals and discusses evidence as to their age.
- 1176 — The Permian life of Texas.
Kans. Acad. Sci., Trans., vol. 18, pp. 94-98, 1903.
Describes the occurrence of fossil remains and physical characters of the Permian Red Beds in Baylor County, Texas.
- 1177 — *Elephas columbi* and other mammals in the swamps of Whitman County, Washington.
Science, new ser., vol. 17, pp. 511-512, 1903.
Describes the occurrence of mammalian remains.
- 1178 — Notes on the Judith River group.
Science, new ser., vol. 17, pp. 870-872, 1903.
Discusses the occurrence of vertebrate fossils and the stratigraphic position of the Judith River beds.
- 1179 **Stevens** (Blamey). Geology of some copper deposits in Alaska.
Eng. & Mg. Jour., vol. 75, p. 782, figs. 1-2, 1903.
- 1180 — Relation of rock segregation to ore deposition.
Eng. & Mg. Jour., vol. 76, p. 574, 1903.
- 1181 **Stevens** (E. A.). Basaltic zones as guides to ore-deposits in the Cripple Creek district, Colorado.
Am. Inst. Mg. Engrs., Trans., vol. 33, pp. 686-698, figs. 1-4, 1903.
Describes the character and occurrence of igneous rocks and the relations of the dikes, fissures, and ore-deposits.

- 1182 **Stevenson** (John J.). Lower Carboniferous of the Appalachian basin.
 Geol. Soc. Am., Bull., vol. 14, pp. 15-96, 1903.
 Describes occurrence, stratigraphy, lithologic characters and geologic relations of Lower Carboniferous formations in the Appalachian region and discusses their nomenclature and correlation, and the physiographic conditions prevailing during their deposition.
- 1183 — J. Peter Lesley.
 Science, new ser., vol. 18, pp. 1-3, 1903.
- 1184 — Joseph Le Conte (obituary).
 Abstract: N. Y. Acad. Sci., Ann., vol. 14, pp. 150-151, 1902.
- 1185 **Stevenson** (Robert). The deposition of ores from an igneous magma.
 Eng. & Mg. Jour., vol. 76, p. 882, 1903.
- 1186 **Stewart** (Alban). Teleosts of the Upper Cretaceous.
 Kans. Univ. Geol. Surv., vol. 6, pp. 257-390, pls. 33-73, 1900.
- 1187 **Stewart** (John), **Gardner** (Frank D.) and. A soil survey in Salt Lake Valley, Utah.
 See Gardner (F. D.) and Stewart (John), 432.
- 1188 **Stoess** (P. C.). The Kayak coal and oil fields of Alaska.
 Mg. & Sci. Press, vol. 87, p. 65, 1903.
 Describes the general geology of the region and the occurrence of coal and petroleum.
- 1189 **Stone** (G. H.). [Discovery of coal on Turkey Creek, Colorado.]
 Am. Geol., vol. 32, p. 132, 1903.
- 1190 **Storms** (W. H.). Some structural features of the California gold belt.
 Mg. & Sci. Press, vol. 87, pp. 112, 129, 149, 165, 183, 202, 216-217, ill., 1903.
 Describes the character and occurrence of the lodes and veins yielding gold ore.
- 1191 **Stose** (George W.). The structure of a part of South Mountain, Pennsylvania.
 Abstract: Science, new ser., vol. 17, p. 387, 1903.

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- 1192 **Taff** (Joseph A.). Tishomingo folio, Indian Territory.
 U. S. Geol. Surv., Geol. Atlas of U. S., folio no. 98, 1903.
 Describes geography, physiography, general relations, pre-Cambrian igneous rocks, Cambrian, Ordovician, Siluro-Devonian, Carboniferous and Cretaceous sedimentary rocks and Quaternary deposits, geologic structure of the Arbuckle Mountain region, and the mineral resources.

- 1193 **Talbot** (Mignon). A contribution to the list of the fauna of the Stafford limestone of New York.
Am. Jour. Sci., 4th ser., vol. 16, pp. 148-150, 1903.
- 1194 **Tarr** (Ralph S.). New physical geography.
New York, The MacMillan Company, xiii, 457 pp., 568 figs., 1903.
- 1195 — Post-Glacial and Inter-Glacial (?) changes of level at Cape Ann, Massachusetts.
Harvard Coll. Mus. Comp. Zool., Bull., vol. 42, pp. 181-191, pls. 1-13, 1903.
Describes physiographic features and discusses evidences of changes of level.
- 1196 **Taylor** (Frank Bursley). The correlation and reconstruction of recessional ice borders in Berkshire County, Massachusetts.
Jour. Geol., vol. 11, pp. 323-364, figs. 1-10, 1903.
Describes topographic and drainage features and moraines, and discusses the evidences as to the movements of the ice sheet and general relations of the ice front to the land relief.
- 1197 — Studies in the glaciation of the Berkshire Hills, Massachusetts.
Abstract: Science, new ser., vol. 17, p. 225, 1903; Sci. Am. Suppl., vol. 55, p. 22666, 1903.
- 1198 **Taylor** (F. W.) and **Rice** (Thomas D.). Soil survey of the Abbeville area, South Carolina.
U. S. Dept. Agric., Field Oper. Bur. Soils, 1902, 4th Rept., pp. 273-289, 1903.
Includes a short account of the physiography and geology.
- 1199 — **Bonsteel** (Jay A.) and. Soil survey of the Salem area, New Jersey.
See Bonsteel (J. A.) and Taylor (F. W.), 105.
- 1200 — **Rice** (Thomas D.) and. Soil survey of the Darlington area, South Carolina.
See Rice (T. D.) and Taylor (F. W.), 1012.
- 1201 **Teggart** (Frederick J.). Literature available in the [Mechanics' Institute] Library [San Francisco, California] on petroleum with some references on asphaltum.
Mechanics' Inst. Lib., San Francisco, Cal., Tech. Ref. List no. 1, 24 pp., 1903.
- 1202 **Thierry** (—). Sur l'éruption volcanique du 8 mai à la Martinique.
Acad. des Sci. [Paris], Compt. rend., vol. 135, pp. 71-72, 1902.
Describes phenomena witnessed during an eruption of Mont Pelé.

- 1203 **Tight** (W. G.). Drainage modifications in southeastern Ohio and adjacent parts of West Virginia and Kentucky.

U. S. Geol. Surv., Professional Paper no. 13, 111 pp., 17 pls., 1 fig., 1903.

Discusses the present drainage of the region under consideration, the pre-Glacial drainage of adjacent regions, the general topographic features and their relation to the Tertiary peneplain, the characters of the present river valleys, the reconstruction of the old drainage system, relations of present and former drainage systems to one another and to the geologic structure, and the geologic events which caused the drainage changes.

- 1204 **Titcomb** (H. A.). The Camp Bird gold mine and mills [Colorado].

School of Mines Quart., vol. 24, pp. 56-67, figs. 1-7, 1902.

Gives a general account of the geology and the occurrence of the gold ore deposits and of the mining operations.

- 1205 **Todd** (James E.). Concretions and their geological effects.

Geol. Soc. Am., Bull., vol. 14, pp. 353-368, pls. 49-53, 1903.

Discusses character, occurrence, and modes of growth of concretions and their influence in producing topographic forms.

- 1206 — Building stones of South Dakota.

Stone, vol. 26, pp. 20-27, ill., 1903.

Describes the character and geologic occurrence of building stones.

- 1207 — A newly discovered rock at Sioux Falls, South Dakota.

Stone, vol. 27, pp. 46-48, 1903.

Describes the occurrence and character of an igneous rock discovered in this vicinity.

- 1208 — Olivet folio, South Dakota.

U. S. Geol. Surv., Geol. Atlas of U. S., folio no. 96, 1903.

Describes geography and topography, general geology, character and occurrence of Algonkian, Cretaceous and Quaternary deposits, geologic history, economic and water resources.

- 1209 — Parker folio, South Dakota.

U. S. Geol. Surv., Geol. Atlas of U. S., folio no. 97, 1903.

Describes geography, general geology, and character and occurrence of Algonkian and Cretaceous strata and Quaternary deposits, the geologic history and economic resources, including underground waters.

- 1210 — Mitchell folio, South Dakota.

U. S. Geol. Surv., Geol. Atlas of U. S., folio no. 99, 1903.

Describes geography, general geology, the character and occurrence of deposits belonging to the Algonkian, Cretaceous, and Quaternary systems, the geologic history and economic resources, more particularly the underground waters.

- 1211 — and **Hall** (C. M.). Alexandria folio, South Dakota.

U. S. Geol. Surv., Geol. Atlas of U. S., folio no. 100, 1903.

Describes geography, general geology, Algonkian, Cretaceous and Quaternary deposits, the geologic history, and economic and artesian water resources of the Alexandria quadrangle.

- 1212 **Todd** (James E.). See Winchell (N. H.), 1342.
- 1213 **Transeau** (Edgar N.). On the geographic distribution and ecological relations of the bog plant societies of northern North America.
Bot. Gaz., vol. 36, pp. 401-420, figs. 1-3, 1903.
Includes a discussion of pre-Glacial distribution and Glacial and later migraticns of these plant societies.
- 1214 **Turner** (Henry W.). Post-Tertiary elevation of the Sierra Nevada.
Geol. Soc. Am., Bull., vol. 13, pp. 540-541, pl. 58, 1903.
Discusses the age of the Sierra Nevada uplift.
- 1215 — The copper-deposits of the Sierra Oscura, New Mexico.
Am. Inst. Mg. Engrs., Trans., vol. 33, pp. 678-681, fig. 1, 1903.
Describes the geographic features and geologic structure of the region and the occurence of copper-bearing reefs.
- 1216 — The Cretaceous auriferous conglomerate of the Cottonwood mining district, Siskiyou County, California.
Eng. & Mg. Jour., vol. 76, pp. 653-654, ill., 1903.
Discusses the character, occurrence, and geological relations of the rock formations, and the source of the gold contained in the conglomerate.
- 1217 — Notes on contact-metamorphic deposits in the Sierra Nevada Mountains.
Am. Inst. Mg. Engrs., Trans. (New York meeting, October, 1903), 2 pp.
Describes occurrences of deposits additional to those noted by Mr. Lindgren (Am. Inst. Mg. Engrs., Trans., vol. 31, pp. 230-231).
- 1218 — Observations on Mother Lode gold deposits, California. [In discussion of paper of W. A. Prichard.]
Am. Inst. Mg. Engrs., Trans. (New York meeting, October, 1903), 2 pp.
Discusses the time-relations of the diorite intrusions and the fissuring.
- 1219 **Tyrrell** (J. B.). A peculiar artesian well in the Klondike.
Eng. & Mg. Jour., vol. 75, p. 188, 1 fig, 1903.
Describes geologic structure of the region and the conditions producing the artesian flow of water.

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- 1220 **Udden** (Johan August). Geology of Mills and Fremont counties [Iowa].
Iowa Geol. Surv., vol. 13, pp. 123-183, pls. 4-7, 1903.
Describes topography and drainage, character, occurrence and geologic relations of Carboniferous and Cretaceous strata and surficial deposits, and economic resources. Includes a report by Prof. B. S. Shimek on the fossils from the loess of these counties.
- 1221 — Foraminiferal ooze in the Coal Measures of Iowa.
Jour. Geol., vol. 11, pp. 283-284, 1903.

- 1222 **Udden** (Johan August). Note to the article on "Foraminiferal ooze in the Coal Measures of Iowa."
 Jour. Geol., vol. 11, p. 430, 1903.
 Notes the occurrence of a bed of foraminiferal ooze in the upper Carboniferous of Texas.
- 1223 **Ulrich** (Edward Oscar) and **Smith** (W. S. Tangier). Lead, zinc, and fluorspar deposits of western Kentucky.
 U. S. Geol. Surv., Bull. no. 213, pp. 205-213, 1903.
 Describes the mining development and geologic structure of the region and the character and occurrence of the veins and vein minerals.
- 1224 — **Hayes** (C. Willard) and. Columbia folio, Tennessee.
 See Hayes (C. W.) and Ulrich (E. O.), 533.
- 1225 **United States Geological Survey**. Geology, etc., of the Coosa Valley, Alabama.
 56th Cong., 2d sess., Senate Doc. no. 65, 4 pp., 1901.
 A letter from the Director of the United States Geological Survey submitting a brief sketch of the geology and natural resources of the Coosa Valley, in the State of Alabama.
- 1226 **Upham** (Warren). Valley loess and the fossil man of Lansing, Kansas.
 Am. Geol., vol. 31, pp. 25-34, 1903.
 Discusses distribution and origin of loess deposits and the evidences for the age of the fossiliferous remains found near Lansing, Kansas.
- 1227 — The life and work of Professor Charles M. Hall.
 Am. Geol., vol. 31, pp. 195-198, pl. 13 (por.), 1903.
- 1228 — How long ago was America peopled?
 Am. Geol., vol. 31, pp. 312-315, 1903.
 Discusses time estimates of Glacial and post-Glacial periods and evidences of antiquity of man in America.
- 1229 — Glacial Lake Nicolet and the portage between the Fox and Wisconsin rivers.
 Am. Geol., vol. 32, pp. 105-115, 1903.
- 1230 — The antiquity of the fossil man of Lansing, Kansas.
 Am. Geol., vol. 32, pp. 185-187, 1903.
- 1231 — The glacial lakes Hudson-Champlain and St. Lawrence.
 Am. Geol., vol. 32, pp. 223-230, 1903.
- 1232 — Glacial Lake Jean Nicolet.
 Am. Geol., vol. 32, pp. 330-331, 1903.
 As the name Lake Nicollet had been previously used by Winchell, the writer amends his name Lake Nicolet to the form given above.
- 1233 — Geology of Prairie Island [Minnesota].
 Memoirs of Exploration in the Basin of the Mississippi, vol. 6, Minnesota, pp. 34-38, 1903.
- 1234 — The past and future of Niagara Falls.
 State Reservation at Niagara, Comm. 19th Ann. Rept., pp. 231-254, 1903.

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- 1235 **Van Diest** (P. H.). A mineralogical mistake.
Colo. Sci. Soc., Proc., vol. 6, pp. 150-156, 1 pl. [1902].
Contains observations on occurrence of rocks and ores, and describes the efforts to find tin in the Greenhorn Mountains of Colorado.
- 1236 **Van Hise** (Charles Richard). Geological work in the Lake Superior region.
Lake Sup. Mg. Inst., Proc. for 1902, vol. 8, pp. 62-69 [1903].
Discusses the difficulties of geologic work in this region and gives an historical review of the work that has been done.
- 1237 — Powell as an explorer.
Wash. Acad. Sci., Proc., vol. 5, pp. 105-112, 1903.
- 1238 — Genetic classification of ore deposits.
Abstract: Science, new ser., vol. 17, pp. 542-543, 1903.
- 1239 **Van Ingen** (Gilbert). A method of facilitating photography of fossils.
Abstract: N. Y. Acad. Sci., Ann., vol. 14, pp. 115-116, 1902.
- 1240 — and **Clark**, (P. Edwin). Disturbed fossiliferous rocks in the vicinity of Rondout, N. Y.
N. Y. State Mus., Bull. 69, pp. 1176-1227, pls. 1-13, 1903.
Describes location, stratigraphy, paleontology, and structural features of Silurian and Devonian strata in the city of Rondout, New York, and its vicinity.
- 1241 **Vaughan** (T. Wayland). An addition to the coral fauna of the Aquia Eocene formation of Maryland.
Wash. Biol. Soc., Proc., vol. 15, pp. 205-206, 1902.
- 1242 — A redescription of the coral *Platytrochus speciosus*.
Wash. Biol. Soc., Proc., vol. 15, pp. 207-209, 1902.
- 1243 — Corrections to the nomenclature of the Eocene fossil corals of the United States.
Wash. Biol. Soc., Proc., vol. 16, p. 101, 1903.
- 1244 — The corals of the Buda limestone.
U. S. Geol. Surv., Bull. no. 205, pp. 37-40, pl. 27, 1903.
- 1245 — Fuller's earth deposits of Florida and Georgia.
U. S. Geol. Surv. Bull. no. 213, pp. 392-399, 1903.
Describes geographic and geologic occurrence and character of deposits of fuller's earth in these States.
- 1246 — See Arnold (Ralph), 38.
- 1247 **Veatch** (Arthur C.). The diversity of the Glacial period on Long Island.
Jour. Geol., vol. 11, pp. 762-776, figs. 1-6, 1903.
Discusses character, occurrence, geologic position, and correlation of glacial deposits on Gardiners and Long Islands, New York.

- 1248 **Veatch** (Arthur C.). Notes on the geology of Long Island.
Science, new ser., vol. 18, pp. 213-214, 1903.
Discusses the occurrence of Quaternary formations and their relation to pre-Glacial topography.
- 1249 **Villarello** (Juan D.). Genesis de los yacimientos mercuriales de Palomas y Huitzucó, en los estados de Durango y Guerrero de la Republica Mexicana.
Soc. Cien. Ant. Alz., Mem. y Rev., vol. 20, pp. 95-136, 1903.
Discusses origin of mercury-bearing ore deposits.
- 1250 **Von Rosenberg** (Leo). Report on the properties of the Summit Coal Company, situated in Marshall County, State of West Virginia.
New York, 12 pp., 9 pls., 1903. (Privately printed.)
Contains geologic sections of Carboniferous strata and data bearing on coal production.
- 1251 **Voyle** (Joseph). Auriferous, and a general theory of gold ore genesis.
Mg. & Sci. Press, vol. 86, pp. 382-383, 1903.

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- 1252 **Wagner** (George). Observations on *Platygonus compressus* Le Conte.
Jour. Geol., vol. 11, pp. 777-782, figs. 1-4, 1903.
- 1253 **Walcott** (Charles D.). New term for the Upper Cambrian series.
Jour. Geol., vol. 11, pp. 318-319, 1903.
Proposes the term Saratogian for Upper Cambrian, and gives a list of formations referred to it.
- 1254 — **John Wesley Powell**.
Wash. Acad. Sci., Proc., vol. 5, pp. 99-130, pl. 1 (por.), 1903.
- 1255 — Twenty-fourth annual report of the Director of the United States Geological Survey to the Secretary of the Interior, 1902-3.
Washington, 302 pp., 26 pls., 1903.
Gives an account of the work of the U. S. Geological Survey for the year 1902-3. Includes a biographical sketch of J. W. Powell.
The rules governing the nomenclature and classification of geologic formations promulgated in the Tenth Annual Report, pp. 63-79, have been recently revised and, as revised, are given in this report on pp. 21-27.
- 1256 **Waldo** (C. A.). Dikes in the Oklahoma Panhandle.
Abstract: Eng. & Mg. Jour., vol. 75, p. 153, 1903; Science, new ser., vol. 17, p. 220, 1903; Sci. Am. Suppl., vol. 55, p. 22647, 1903.
- 1257 **Walker** (Bryant). On the shells of marls.
Mich. Geol. Surv., vol. 8, pt. 3, pp. 97-102, 1903.
Describes the occurrence of gastropodous shells in Michigan marl deposits.

- 1258 **Ward** (Henry A.). Catalogue of the Ward-Coonley collection of meteorites.
Chicago, 99 pp., 6 pls., 1900; 28 pp., 1901. (Private publication.)
Contains notes on the character and occurrence of meteorites.
- 1259 — The Bath Furnace [Kentucky] meteorite.
Am. Jour. Sci., 4th ser., vol. 15, pp. 316-319, 1 fig., 1903.
Describes fall and characters.
- 1260 — The Andover [Maine] meteorite.
Am. Jour. Sci., 4th ser., vol. 15, pp. 395-396, 1 fig., 1903.
- 1261 **Ward** (Lester F.). Correlation of the Potomac formation in Maryland and Virginia.
Abstract: Science, new ser., vol. 17, pp. 941-942, 1903.
- 1262 **Warman** (Philip Creveling). Catalogue and index of the publications of the United States Geological Survey, 1901 to 1903.
U. S. Geol. Surv., Bull. no. 215, 234 pp., 1903.
- 1263 — Catalogue of the published writings of John Wesley Powell.
Wash. Acad. Sci., Proc., vol. 5, pp. 131-187, 1903.
- 1264 **Warren** (C. H.). Mineralogical notes. I. Native arsenic from Arizona. II. Anthophyllite with the fayalite from Rockport, Mass. III. Cerussite and phosgenite from Colorado.
Am. Jour. Sci., 4th ser., vol. 16, pp. 337-344, 1903.
Describes occurrence and characters of these minerals.
- 1265 **Washburne** (Chester). Notes on the marine sediments of eastern Oregon.
Jour. Geol., vol. 11, pp. 224-229, 1903.
Describes occurrence of fossiliferous limestone of Carboniferous age and gives notes on the occurrence of strata and fossils of Triassic, Jurassic, and Cretaceous age. Includes reports by George H. Girty on the fossils collected from the Carboniferous limestone and by T. W. Stanton on fossils from the Chico formation.
- 1266 **Washington** (Henry Stephens). Chemical analyses of igneous rocks published from 1884 to 1900, with a critical discussion of the character and use of analyses.
U. S. Geol. Surv., Professional Paper no. 14, 495 pp., 1903.
Discusses character of chemical analyses of igneous rocks, the construction and nomenclature of the new quantitative classification and its correlation with the qualitative system, and methods of calculation employed, and gives tables embracing nearly all published analyses of igneous rocks arranged according to the new system.
NOTE.—These chemical analyses have not been separately listed in the index.
- 1267 — The calculation of center-points in the quantitative classification of igneous rocks.
Abstract: Science, new ser., vol. 17, p. 668, 1903.

- 1268 **Washington** (Henry Stephens). The quantitative distribution of rock magmas.
Abstract: Eng. & Mg. Jour., vol. 75, p. 153, 1903.
- 1269 — and others. Quantitative classification of igneous rocks.
See Cross (Whitman) and others, 251.
- 1270 **Watson** (Thomas Leonard). Copper-bearing rocks of Virgilina copper district, Virginia and North Carolina.
Denison Univ., Sci. Lab., Bull., vol. 12, pp. 97-127, pls. 7-9, fig. 1, 1903.
Reviews previous work and describes the occurrence, petrographic characters, and composition of igneous rocks, and the occurrence and character of the deposits of copper ores.
- 1271 — The yellow ocher deposits of the Cartersville district, Bartow County, Georgia.
Am. Inst. Mg. Engrs., Trans. (New York meeting, October, 1903), 24 pp.
Gives an account of the geology and topography of the district and describes the occurrence, composition and mining of the ocher deposits.
- 1272 — Geological relations of the manganese ore deposits of Georgia.
Am. Inst. Mg. Engrs., Trans. (Albany meeting, February, 1903), 47 pp. Discussion, 3 pp.
Describes the stratigraphy and geologic structure and the character and occurrence of the manganese ores of the Paleozoic and crystalline rocks of northern Georgia and discusses the origin of the ore deposits.
- 1273 **Webster** (Arthur). Geology of the west coast of Vancouver Island.
Can. Geol. Surv., Summ. Rept. for 1902, pp. 52-74, 1903.
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- 1274 **Weed** (Walter Harvey). Geological sketch of the Hot Springs district, Arkansas.
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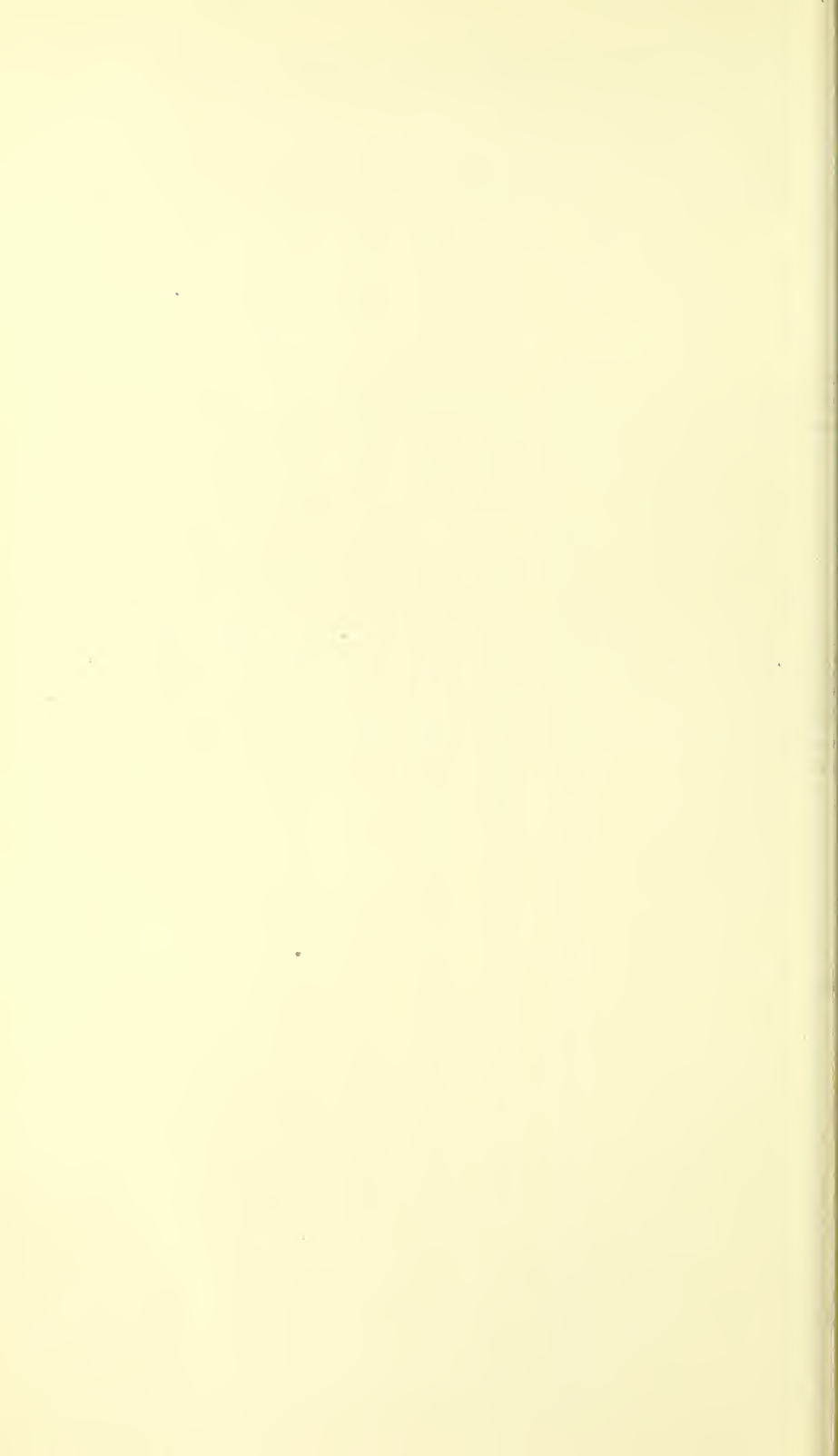
Describes the general geology of the region, and the occurrences, geologic relations, and character of the copper, silver-lead, and gold deposits.

ADDENDA TO BIBLIOGRAPHIES FOR PREVIOUS YEARS.

1894	1895	1896	1897	1898
1077	391	299	220	74
			221	222
			300	329
			1078	782
				914

1899	1900			
419	1	429	628	872
922	64	432	808	923
1079	310	497	869	1120
	324	624	870	1130

1901	1902			
81	20	356	672	858
82	21	402	692	874
95	42	416	699	911
102	43	453	711 ^a	915
103	50	468	712	916
104	71	497	713	941
227	79	500	714	942
234	86	504	715	943
242	105	518	716	961
311	106	534	717	962
312	107	541	718	966
313	114	561	719	967
321	122	575	727	977
322	142	584	754	1008
330	143	590	755	1113
331	149	591	760	1142
342	150	596	769	1143
382	157	599	772	1184
433	177	616	773	1202
434	215	640	774	1204
462	216	641	841	1235
497	224	650	846	1239
503	234	657	847	1241
578	269	658	854	1242
595	293	669	855	1274
652	306	670	856	1294
750	314	671	857	1365
791				
871				
873				
902				
1007				
1053				
1141				
1225				



CLASSIFIED KEY TO THE INDEX.

	Page.
Alabama	149
Alaska	149
Archean and Algonkian	149
Appalachian region.....	149
Canada	149
Great Basin region	149
Great Plains region.....	149
Lake Superior region	149
Mississippi Valley region.....	149
Southwestern region.....	149
General	149
Arizona	149
Arkansas	150
Bibliography	150
Biography	151
California.....	151
Cambrian.....	152
Appalachian region.....	152
Canada	152
Great Basin region	152
Mississippi Valley region.....	152
New England and New York.....	152
Rocky Mountain region.....	152
Southwestern region.....	152
General	152
Canada	152
Alberta	152
Assiniboia	152
British Columbia.....	152
Keewatin.....	152
Labrador	152
Manitoba	152
New Brunswick.....	152
Northwest Territory.....	153
Nova Scotia.....	153
Ontario.....	153
Quebec.....	153
Yukon Territory	153
General	153
Carboniferous.....	153
Alaska	153
Appalachian region.....	154
Canada	154

Carboniferous—Continued.	Page.
Great Basin region	154
Great Lakes region	154
Great Plains region	154
Mississippi Valley region	154
New England and New York	154
Ohio Valley region	154
Rocky Mountain region	154
Southwestern region	154
General	154
Cartography	154
Chemical analyses	154
Classification	158
Colorado	158
Connecticut	159
Correlation	159
Cretaceous	159
Atlantic coast region	159
Canada	159
Great Basin region	159
Great Plains region	159
Gulf region	159
Mexico	159
Mississippi Valley region	159
New England and New York	159
Pacific coast region	159
Rocky Mountain region	159
Southwestern region	159
General	159
Delaware	159
Devonian	159
Appalachian region	159
Canada	160
Great Basin region	160
Great Lakes region	160
Mississippi Valley region	160
New England and New York	160
Ohio Valley region	160
Pacific coast region	160
Rocky Mountain region	160
Southwestern region	160
General	160
District of Columbia	160
Dynamic and structural geology (geographic divisions)	160
Appalachian region	160
Canada	160
Central America	160
Great Basin region	160
Great Lakes region	160
Hawaiian Islands	160
Mexico	160
New England and New York	161
Ohio Valley region	161
Pacific coast region	161

Dynamic and structural geology (geographic divisions)—Continued.	Page.
Rocky Mountain region	161
Southwestern region	161
West Indies	161
Dynamic and structural geology (divisions by subject-matter)	161
Deformation	161
Earthquakes	161
Erosion	161
Faulting	162
Folding	162
Glaciers	162
Intrusion	162
Jointing	162
Landslides	162
Magmatic differentiation	162
Metamorphism	162
Ore formation	162
Oscillation	162
Sedimentation	162
Underground temperature	162
Volcanoes	162
Weathering	163
General	163
Economic geology	163
Alabama	163
Alaska	163
Arizona	164
Arkansas	164
California	164
Canada	164
Colorado	165
Connecticut	165
Delaware	165
District of Columbia	165
Florida	165
Georgia	165
Hawaiian Islands	165
Idaho	165
Illinois	165
Indiana	165
Indian Territory	166
Iowa	166
Kansas	166
Kentucky	166
Louisiana	166
Maine	166
Maryland	166
Massachusetts	166
Mexico	166
Michigan	166
Minnesota	166
Mississippi	167
Missouri	167
Montana	167

Economic geology—Continued.

	Page.
Nebraska	167
Nevada	167
New Jersey	167
New Mexico	167
New York	167
Newfoundland	167
Nicaragua	167
North Carolina	167
North Dakota	167
Ohio	167
Oregon	168
Panama	168
Pennsylvania	168
Philippine Islands	168
Porto Rico	168
Rhode Island	168
South Carolina	168
South Dakota	168
Tennessee	168
Texas	168
Utah	168
Vermont	168
Virginia	168
Washington	168
West Indies	169
West Virginia	169
Wisconsin	169
Wyoming	169
General	169
Economic products described	170
Florida	173
Geologic formations described	173
Geologic maps	187
Georgia	187
Glacial geology	188
Appalachian region	188
Atlantic coast region	188
Canada	188
Great Lakes region	188
Great Plains region	188
Mississippi Valley region	188
New England and New York	188
Ohio Valley region	188
Pacific coast region	188
Rocky Mountain region	188
General	188
Greenland	189
Guatemala	189
Hawaiian Islands	189
Hydrology	189
Atlantic coast region	189
Canada	189
Great Plains region	189

Hydrology—Continued.

Page.

Hawaiian Islands	189
Mississippi Valley region	189
New England and New York	189
Ohio Valley region	189
Pacific coast region	189
Rocky Mountain region	189
Southwestern region	189
General	189

Idaho	189
-------------	-----

Illinois	189
----------------	-----

Indiana	189
---------------	-----

Indian Territory	190
------------------------	-----

Iowa	190
------------	-----

Jura	190
------------	-----

Great Basin region	190
--------------------------	-----

Great Plains region	190
---------------------------	-----

Pacific coast region	190
----------------------------	-----

Southwestern region	190
---------------------------	-----

Kansas	190
--------------	-----

Kentucky	190
----------------	-----

Louisiana	191
-----------------	-----

Maine	191
-------------	-----

Maryland	191
----------------	-----

Massachusetts	191
---------------------	-----

Mexico	191
--------------	-----

Michigan	191
----------------	-----

Mineralogy	192
------------------	-----

Minerals described	192
--------------------------	-----

Minnesota	194
-----------------	-----

Mississippi	195
-------------------	-----

Missouri	195
----------------	-----

Montana	195
---------------	-----

Nebraska	195
----------------	-----

Nevada	195
--------------	-----

Newfoundland	195
--------------------	-----

New Hampshire	195
---------------------	-----

New Jersey	195
------------------	-----

New Mexico	195
------------------	-----

New York	196
----------------	-----

Nicaragua	197
-----------------	-----

Nomenclature	197
--------------------	-----

North Carolina	197
----------------------	-----

North Dakota	197
--------------------	-----

Ohio	197
------------	-----

Oklahoma	197
----------------	-----

Ordovician	197
------------------	-----

Appalachian region	197
--------------------------	-----

Canada	197
--------------	-----

Great Basin region	197
--------------------------	-----

Mississippi Valley region	197
---------------------------------	-----

New England and New York	197
--------------------------------	-----

Ohio Valley region	198
--------------------------	-----

Ordovician—Continued.	Page.
Rocky Mountain region.....	198
Southwestern region.....	198
Oregon	198
Paleogeography	198
Paleontology.....	198
Cambrian.....	198
Carboniferous.....	198
Cretaceous.....	198
Devonian.....	199
Jurassic.....	199
Ordovician.....	199
Quaternary.....	199
Silurian.....	199
Tertiary.....	200
Triassic.....	200
Invertebrate.....	200
Vertebrate.....	201
Paleobotany.....	202
General.....	202
Genera and species described.....	202
Panama	235
Pennsylvania	235
Petrology.....	235
Arizona.....	235
California.....	235
Canada.....	235
Colorado.....	235
Georgia.....	236
Guatemala.....	236
Idaho.....	236
Massachusetts.....	236
Mexico.....	236
Minnesota.....	236
Newfoundland.....	236
New Hampshire.....	236
New Mexico.....	236
New York.....	236
North Carolina.....	236
Oregon.....	236
Pennsylvania.....	236
South Dakota.....	236
Tennessee.....	236
Utah.....	236
Vermont.....	236
Virginia.....	236
Washington.....	236
West Indies.....	236
Wisconsin.....	236
Wyoming.....	236
General.....	236
Rocks described.....	237
Philippine Islands.....	237

	Page.
Physiographic geology	237
Alaska	237
Appalachian region	237
Atlantic coast region	238
Canada	238
Great Basin region	238
Great Lakes region	238
Great Plains region	238
Hawaiian Islands	238
Mississippi Valley region	238
New England and New York	238
Ohio Valley region	238
Pacific coast region	238
Rocky Mountain region	239
Southwestern region	239
West Indies	239
General	239
Porto Rico	239
Quaternary	239
Appalachian region	239
Atlantic coast region	239
Canada	239
Great Basin region	239
Great Lakes region	239
Great Plains region	239
Gulf region	239
Mississippi Valley region	239
New England and New York	239
Ohio Valley region	239
Pacific coast region	239
Rocky Mountain region	239
Southwestern region	239
General	239
Rhode Island	239
Salvador	239
Silurian	239
Appalachian region	239
Canada	239
Great Basin region	239
Great Lakes region	240
Mississippi Valley region	240
New England and New York	240
Ohio Valley region	240
Southwestern region	240
South Carolina	240
South Dakota	240
Tennessee	240
Tertiary	240
Atlantic coast region	240
Canada	240
Great Basin region	240
Great Plains region	240
Greenland	240

Tertiary—Continued.

	Page.
Gulf region	240
Pacific coast region	241
Rocky Mountain region	241
Southwestern region	241
West Indies	241
General	241
Texas	241
Trias	241
Canada	241
Great Basin region	241
Great Plains region	241
Pacific coast region	241
Southwestern region	241
Utah	241
Vermont	241
Virginia	241
Washington	242
West Indies	242
West Virginia	243
Wisconsin	243
Wyoming	243
Miscellaneous (not indexed elsewhere)	243

INDEX.

[The numbers refer to entries in the Bibliography.]

Alabama.

- Carboniferous fossils in Ocoee slates, Smith, 1125.
- Clays of the United States, Ries, 1024.
- Geology of the Coosa Valley, 1225.
- Lower Carboniferous of Appalachian Basin, Stevenson, 1182.
- Marble formations of Cahaba River, Byrne, 149.
- Materials and manufacture of Portland cement, Eckel, 345.
- New species of Eocene fossils, Aldrich, 18.
- New species of Tertiary fossils, Aldrich, 16.
- Portland cement materials of Alabama, Smith, 1126.
- Soil survey of Perry County, Burke, 145.

Alaska.

- Carboniferous section in Copper River Valley, Mendenhall, 878.
- Chistochina gold field, Mendenhall, 876.
- Chitina copper deposits, Mendenhall, 879.
- Coal-bearing series of the Yukon, Collier, 233.
- Coal fields of Cook Inlet, Alaska, and Pacific Coast, Kirsopp, 693.
- Coal resources of Yukon Basin, Collier, 231.
- Coal resources of the Yukon, Collier, 229.
- Copper deposits of Mount Wrangell region, Mendenhall and Schrader, 881.
- Geology of copper deposits, Stevens, 1179.
- Glenn Creek gold mining district, Collier, 230.
- Gold mining in Arctic America, Penrose, 969.
- Gold mining in Klondike, Miers, 899.
- Gold production of North America, Lindgren, 802.
- Gold production of North America, Spurr, 1162.
- Kayak coal and oil fields, Stoess, 1188.
- Mineral resources of Mount Wrangell district, Mendenhall and Schrader, 880.
- Mineral resources of southeastern Alaska, Brewer, 127.
- Mining at the Alaska Treadwell, Kinzie, 691.
- Muir glacier, Andrews, 34.
- Observations paléontologiques dans l'Alaska, Gaudry, 436.
- Pacific mountain system, Spencer, 1148.
- Placer gold mining in Alaska in 1902, Brooks, 132.
- Sketch of Nome, Bogdanovitch, 95.
- Stream tin in Alaska, Brooks, 133.
- Tin deposits of York region, Rickard, 1016.
- Tin in Alaska, Bell, 68.

Alaska—Continued.

- Tin in the York region, Collier, 232.
- Tin ledges in Alaska, Bell, 67.
- Treadwell group of mines, Kinzie, 690.
- Wrangell Mountains, Mendenhall, 877.

Archean and Algonkian.

Appalachian region.

- Cranberry folio, Keith, 659.
- Topography and geology of southern Appalachians, Keith, 658.

Canada.

- Classification of the Archean, Coleman, 224.
- Geological exploration in district of White Bay, Howley, 620.
- Gold ores of western Ontario, Brent, 124.
- Northeastern Canada to the Arctic coast, Hanbury, 499.

- Round Lake to Abitibi River, Bolton, 98.
- Up and down the Mississaga, Gratton, 478.

Great Basin region.

- Geology of Nevada, Spurr, 1155.
- Paleozoic rocks of Great Basin region, Weeks, 1288.

Great Plains region.

- Alexandria folio, Todd and Hall, 1211.
- Hartville folio, Smith, 1138.
- Mitchell folio, Todd, 1210.
- Olivet folio, Todd, 1208.
- Parker folio, Todd, 1209.

Lake Superior region.

- Mesabi iron-bearing district of Minnesota, Leith, 786.
- Vermilion district of Minnesota, Clements, 211.
- Vermilion iron-bearing district of Minnesota, Clements, 210.

Mississippi Valley region.

- Geology of Minnesota, Hall, 495.

Southwestern region.

- Geology of Fort Apache region, Reagan, 1005.
- Tishomingo folio, Taff, 1192.

General.

- Granite, Winchell, 1346.
- Little Cottonwood granite body of Wasatch Mountains, Emmons, 372.
- Pre-Cambrian literature for 1902-3, Leith, 789.

Arizona.

- Age of lavas of plateau region, Reagan, 1004.
- Arizona diatomite, Blake, 83.
- Cement investigations in Arizona, Duryee, 333.
- Copper deposits at Clifton, Lindgren, 798.
- Copper deposits of Bisbee, Ransome, 992, 993.
- Copper deposits of Clifton, Lindgren, 801.

Arizona—Continued.

- Copper deposits of the Kaibab Plateau, Jennings, 639.
- Diatom-earth in Arizona, Blake, 84.
- Geology and copper deposits of Bisbee, Ransome, 994.
- Geology of Arizona, Blake, 88.
- Geology of Fort Apache region, Reagan, 1005.
- Geology of Globe copper district, Ransome, 991.
- Gold production of North America, Lindgren, 802.
- Mineralogical notes, Headden, 535.
- Mineralogical notes, Warren, 1264.
- Physiography of southern Arizona and New Mexico, Fairbanks, 383.
- Plateau province of Utah and Arizona, Davis, 282.
- Recent discoveries in Arizona, Burgess, 139.
- Secondary enrichment, Probert, 981.
- Soil survey in Salt River Valley, Means, 871.
- Soil survey of the Yuma area, Holmes, 598.
- Underground waters of Arizona, Skinner, 1119.
- Verde mining district, Miller, 903.
- Walls of the Colorado Canyon, Davis, 287.
- Tombstone and its mines, Blake, 86, 87.
- Tombstone mining district, Church, 185.

Arkansas.

- Analysis of waters from Hot Springs, Haywood, 534.
- Arkansas-Indian Territory coal field, Bache, 47.
- Asphalt deposits of Pike County, Hayes, 527.
- Geological sketch of Hot Springs district, Weed, 1274.
- Origin of bedded breccias in Arkansas, Adams, 9.
- Saddle-back topography of the Boone chert region, Purdue, 984.
- Soil survey of the Stuttgart area, Lapham, 768.
- Zinc and lead deposits of northern Arkansas, Adams, 7, 8.

Bibliography.

- Accessions to library of Geological Society of America, Cushing, 258.
- Artesian basins in Idaho and Oregon, Russell, 1049.
- Bibliography and index of North American geology, paleontology, petrology, and mineralogy for the year 1902, Weeks, 1286.
- Bibliography of Canadian geology and paleontology for the year 1901, Ami, 20.
- Bibliography of Dr. George M. Dawson, Ami, 21.
- Biographical notice of Clarence King, Raymond, 998.
- Canadian specimens of Lituities, Whiteaves, 1306.
- Carboniferous ammonoids of America, Smith, 1137.
- Carboniferous formations and faunas of Colorado, Girty, 455.
- Clastic dikes, Newsom, 930.

Bibliography—Continued.

- Catalogue and index of publications of Hayden, King, Powell and Wheeler surveys, Schmeckebier, 1075.
- Catalogue of published writings of John Wesley Powell, Warman, 1263.
- Contributions to economic geology, Emmons, Hayes, 522.
- Devonian era in Ohio basin, Claypole, 206.
- Eurypterid fauna from the Salina, Sarle, 1070.
- Fossils from the Vancouver Cretaceous, Whiteaves, 1308.
- Geological relationship of volcanoes of West Indies, Spencer, 1152.
- Geology of Globe copper district, Arizona, Ransome, 991.
- Geology of the Jemez-Albuquerque region, Reagan, 1003.
- Hamilton formation in central New York, Cleland, 207.
- Identification of Meckelian and mylohyoid grooves in mammals, Bensley, 71.
- Index to publications of New York State Natural History Survey, Ellis, 362.
- Investigation of metalliferous ores, Emmons, 374.
- Laurentian peneplain, Wilson, 1332.
- Lead and zinc deposits of southwestern Wisconsin, Grant, 475.
- Life and work of the late Doctor Selwyn, Ami, 21.
- Literature of structural materials, Eckel, 343.
- Literature on petroleum, Teggart, 1201.
- Marl-loess of lower Wabash Valley, Fuller and Clapp, 426.
- Memoir of Edward Waller Claypole, Comstock, 236.
- Memoir of George Mercer Dawson, Adams, 2.
- Memoir of Ralph Dupuy Lacey, White, 1295.
- Memoir of Theodore Greely White, Kemp, 664.
- Marine Pliocene and Pleistocene of San Pedro, Arnold, 38.
- Marine turtle Archelon, Wieland, 1414.
- Mesabi iron-bearing district of Minnesota, Leith, 786.
- Molding sand, Eckel, 346.
- Mollusca of Buda limestone, Shattuck, 1098.
- Molybdenite, Wells, 1292.
- Morphogenesis of Platystrophia, Cumings, 254.
- Mountain ranges of Great Basin, Davis, 283.
- New York mineral localities, Whitlock, 1311.
- North American plesiosaurs, Williston, 1325.
- Old channels of the Mississippi in Iowa, Leverett, 791.
- Ore deposits of Sudbury, Dickson, 297.
- Organization and work of the Geological Survey of Ohio, Orton, 944a.
- Peat and its occurrence in New York, Ries, 1025.
- Plateau province of Utah and Arizona, Davis, 282.
- Platygonus compressus Le Conte, Wagner, 1252.
- Pre-Kansan and Iowan deposits of Long Island, N. Y., Fuller, 421.

Bibliography—Continued.

- Pseudoceratites of the Cretaceous, Hyatt, 625.
 Publications of U. S. Geological Survey, 1901-1903, Warman, 1262.
 Quantitative classification of igneous rocks, Cross and others, 251.
 Recent literature on Laramie formation, Hay, 514.
 Report of Staté geologist of Nebraska, Barbour, 56.
 Rocks of Rondout, Van Ingen and Clark, 1240.
 Sketch of life and work of Charles Baker Adams, Seely, 1094.
 Summaries of literature of economic geology, Eckel, 344.
 Summary of literature of North American Pleistocene geology, Leverett, 792.
 Vermilion iron-bearing district of Minnesota, Clements, 209.
 Volcanic action and the West Indian eruptions of 1902, Lobley, 807.
 Volcanic ash beds of Montana, Rowe, 1038.
 Wilbur Clinton Knight, Nelson, 927.
 Writings of James G. Cooper on conchology and palaeontology, Raymond, 999.
 Xinantacatl ou volcan Nevado de Toluca, Ordoñez, 941.

Biography.

- Adams, Charles Baker, sketch of life and work of, Seely, 1094.
 Clappole, Edward Waller, memoir of, Comstock, 236.
 Dawson, George Mercer, Harrington, 500.
 Dawson, George Mercer, memoir of, Adams, 2.
 Hall, Charles Monroe. Life and work of Professor Charles M. Hall, Upham, 1227.
 Harris, Israel Hopkins. The I. H. Harris collection of invertebrate fossils in the U. S. National Museum, Schuchert, 1088.
 Hyatt, Alpheus, Stanton, 1167.
 King, Clarence, biographical notice of, Raymond, 998.
 Knight, Wilbur Clinton, Nelson, 927.
 Lacoe, Ralph Dupuy, memoir of, White, 1295.
 Lesley, J. Peter, biographical notice of, Lyman, 822.
 Lesley, J. Peter, Frazer, 417.
 Lesley, J. Peter, Halberstadt, 491.
 Lesley, J. Peter, Stevenson, 1183.
 Le Conte, autobiography, 780.
 Le Conte, Joseph, Stevenson, 1184.
 Orton, Edward, Hobbs, 584.
 Powell as an anthropologist, McGee, 832.
 Powell as an explorer, Van Hise, 1237.
 Powell as a geologist, Gilbert, 442.
 Powell as a man, Langley, 765.
 Powell as a soldier, Henderson, 550.
 Powell, John Wesley, Gilbert, 441.
 Powell, John Wesley, Merrill, 889.
 Powell, John Wesley, Walcott, 1254, 1255.
 Selwyn, Doctor, life and work of, Ami, 24.
 White, Theodore Greely, memoir of, Kemp, 664, 672.

California.

- Ascent of Mt. Whitney, with notes on the geology, Hallock, 496.

California—Continued.

- Basin-range structure in Death Valley region, Campbell, 169.
 Bismuth and bismite from Pala, Kunz, 709.
 Borax deposits of eastern California, Campbell, 168.
 Californite, a new ornamental stone, Kunz, 708.
 Canidæ of California, Merriam, 883.
 Clastic dikes, Newson, 930.
 Composition and occurrence of petroleum, Mabery, 823.
 Contact-metamorphic deposits in Sierra Nevada Mountains, Turner, 1217.
 Copper deposits of Redding region, Diller, 303.
 Cretaceous auriferous conglomerate of Siskiyou County, Turner, 1216.
 Dredging in Oroville, Knox, 701.
 Exploration of Potter Creek cave, Shasta County, Sinclair, 1115.
 Geological section of the middle coast ranges of California, Lawson, 776.
 Geologizing by the seaside, Lakes, 745.
 Geology of district west of Redding, O'Brien, 935.
 Geology of Nevada and adjacent portions of California, Spurr, 1155.
 Glacial stages in Klamath Mountains, Hershey, 553.
 Gold production of North America, Lindgren, 802.
 Great lava flood, Redway, 1007.
 Hanging valleys of the Yosemite, Branner, 118.
 Ichthyosauria from Triassic of California, Merriam, 882.
 Identity of palacheite and botryogen, Eakle, 334.
 Industrie du pétrole en Californie, Heurteau, 560.
 Iron ores of the Redding quadrangle, Diller, 304.
 Klamath Mountains section, Diller, 302.
 Klamath Mountains, Diller, 299.
 Lilac-colored spodumene, Kunz, 707.
 Limestone of the Redding district, Diller, 305.
 Marine Pliocene and Pleistocene of San Pedro, Arnold, 38.
 Minerals from Leona Heights, Schaller, 1073.
 Mother Lode gold deposits, Prichard, 980.
 Mother Lode gold deposits, Turner, 1218.
 Mount Lassen and cinder cone region, Miller, 902.
 Neocene rivers of the Sierra Nevada, Lindgren, 796.
 Origin of transverse mountain valleys, Le Conte, 782.
 Palacheite, Eakle, 335.
 Petroleum fields of California, Eldridge, 359.
 Physiography and geology of the Siskiyou Range, Anderson, 29.
 Physiography of California, Fairbanks, 382.
 Plumasite, Lawson, 775.
 Post-Tertiary elevation of the Sierra Nevada, Turner, 1214.

California—Continued.

- Prehistoric California, Yates, 1365.
 River terraces and Glacial series in California, Hershey, 556.
 River terraces of Klamath region, Hershey, 557.
 Sierran valleys of Klamath region; Hershey, 555.
 Soil survey around Santa Ana, Holmes, 595.
 Soil survey around Fresno, Means and Holmes, 873.
 Soil survey around Imperial, Means and Holmes, 874.
 Soil survey of the Hanford area, Lapham and Heileman, 772.
 Soil survey of the lower Salinas Valley, Lapham and Heileman, 773.
 Soil survey of the San Gabriel area, Holmes, 596.
 Soil survey of the Ventura area, Holmes and Mesmer, 599.
 Spodumene from San Diego County, Schaller, 1074.
 Structural features of California gold belt, Storms, 1190.
 Structure of Klamath Mountains, Hershey, 554.
 Tortoise from the auriferous gravels, Sinclair, 1117.
 Valley of southern California, Hilgard, 566.

Cambrian.

Appalachian region.

- Basal conglomerate in Lehigh and Northampton counties, Pennsylvania, Peck, 964.
 Cranberry folio, Keith, 659.
 Manganese ore deposits of Georgia, Watson, 1272.
 Paleozoic faunas, Weller, 1291.
 Topography and geology of southern Appalachians, Keith, 658.

Canada.

- Adams Lake series, Evans, 380.
 Cambrian rocks of Cape Breton, Matthew, 858.
 Northeastern Canada to the Arctic coast, Hanbury, 499.
 Rock contacts in the Kingston district, Ellis, 367.
 Upper Cambrian age of Dictyonema slates of Angus Brook, Ami, 23.

Great Basin region.

- Geology and copper deposits of Bisbee, Ransome, 994.
 Geology of Globe copper district, Ransome, 991.
 Geology of Nevada, Spurr, 1155.
 Paleozoic rocks of Great Basin region, Weeks, 1288.

Mississippi Valley region.

- Dalles of the St. Croix, Berkey, 74.
 Geology of Minnesota, Hall, 495.
 Geology of Missouri, Gallaher, 429.
 Lead and zinc deposits of southwestern Wisconsin, Grant, 475.

New England and New York.

- Cambrie Dictyonema fauna of eastern New York, Ruedemann, 1042.
 Sedentary impression known as Climactichnites, Woodworth, 1351.

Cambrian—Continued.

Rocky Mountain region.

- Carboniferous formations and faunas of Colorado, Girty, 455.

Southwestern region.

- Tishomingo folio, Taff, 1192.

General.

- Geographische Verbreitung und Entwicklung des Cambrium, Frech, 419.
 New term for Upper Cambrian series, Walcott, 1253.

Canada.

Alberta.

- Fossil Cyrena from Alberta, Whiteaves, 1302.
 Frank disaster, Fernie, 393.
 Frank disaster, Green, 479.
 Frank disaster, Smith, 1128.
 Geology of Anthracite, Alberta, Poole, 974.
 Rock slide at Frank, Brewer, 125.
 Turtle Mountain rock slide, Dowlen, 318.

Assiniboia.

- Eastern Assiniboia and southern Manitoba, Dowling, 319.

British Columbia.

- Adams Lake series, Evans, 380.
 Boundary Creek district, Brock, 131.
 Cambrian brachiopoda and mollusca of Mount Stephen, Matthew, 857.
 Cardioceras from the Crows Nest coal fields, Whiteaves, 1305.
 Coal fields of Cook Inlet, Alaska, and Pacific coast, Kirsopp, 693.
 Fossils from the Vancouver Cretaceans, Whiteaves, 1309.
 Geology of Vancouver Island, Haycock, 521.
 Geology of Vancouver Island, Webster, 1273.
 Mount Sicker mining district, Brewer, 128.
 Ordovician succession in eastern Ontario, Ami, 25.
 Ore deposits of Rossland, MacDonald, 831.
 Ore quarrying in the Boundary district, Jacobs, 632.
 Pacific mountain system, Spencer, 1148.
 Petrography of Kettle River mining division, Silver, 1111.

Keewatin.

- Geological reconnaissance of Albany River, Wilson, 1333.

Labrador.

- Geology of Labrador, Daly, 269.

Manitoba.

- Eastern Assiniboia and southern Manitoba, Dowling, 319.
 Turtle Mountain, Manitoba, Dowling, 320.

New Brunswick.

- Albert shale deposits, Ellis, 365.
 Carboniferous rocks of Chignecto Bay, Poole, 975.
 Geological observations in northern New Brunswick, Bailey, 52.
 Highlands of northern New Brunswick, Bailey, 53.
 Physiography of New Brunswick, Ganong, 430.
 Surface geology of New Brunswick, Stead, 1172.

Canada—Continued.

Northwest Territory.

- Gold mining in Klondike, Miers, 899.
- Region southwest of Fort Smith, Slave River, Camsell, 162.

Nova Scotia.

- Batrachian footprints, Matthew, 861.
- Batrachian footprints of Carboniferous system, Matthew, 859.
- Cambrian rocks of Cape Breton, Matthew, 858.
- Carboniferous rocks of Chignecto Bay, Poole, 975.
- Dictyonema slates of Angus Brook, New Canaan, and Kentville, Poole, 973.
- Geological investigation in Nova Scotia, Ells, 363.
- Meso-Carboniferous age of the Union and Riversdale formations, Ami, 26.
- Nova Scotia gold fields, Faribault, 387.
- Surveys and explorations in Nova Scotia, Fletcher, 403.
- Upper Cambrian age of Dictyonema slates of Angus Brook, Ami, 23.

Ontario.

- Algonquin shore line in Simcoe County, Hunter, 622.
- Artesian borings, surface deposits and ancient beaches in Ontario, Chalmers, 180.
- Cobalt-nickel arsenides and silver in Ontario, Miller, 906.
- Fossiliferous rocks of southwest Ontario, Parks, 958.
- Geological notes, Grant, 475.
- Geology of Bruce Mines district, Ingall, 629.
- Gold ores of western Ontario, Brent, 124.
- Iron-bearing rocks in Ontario, Coleman, 226.
- Iron ranges of northern Ontario, Miller, 907.
- Laurentian limestones and granite of Haliburton County, Graton, 477.
- Michipicoten gold belt, Clarke, 191.
- Moose Mountain iron range, Leith, 788.
- Nepheline syenite in western Ontario, Miller, 905.
- New species of Matheria, Whiteaves, 1304.
- Ore deposits of Sudbury, Dickson, 297.
- Platinum in nickel-copper ores, Dickson, 298.
- Region northeast of Nipigon Lake, Parks, 957.
- Region northwest of Lake Nipigon, McInnes, 833.
- Rock contacts in the Kingston district, Ells, 367.
- Round Lake to Abitibi River, Bolton, 98.
- Shore features of Lake Huron, Jefferson, 635.
- Sudbury mining district, Barlow, 58.
- Sudbury nickel deposits, Coleman, 225.
- Up and down the Mississauga, Graton, 478.

Prince Edward Island.

- Geology of Prince Edward Island, Ells, 366.

Quebec.

- Asbest in Canada, Cirkel, 187.
- Canadian amphiboles, Harrington, 501.
- Copper-bearing rocks of Quebec, Dresser, 325.
- Geology of St. Helens Island, Nolan and Dixon, 933.
- Monteregian Hills, Adams, 3.
- Native arsenic from Montreal, Evans, 381.
- Oil fields of Gaspé, Ells, 364.
- Rock contacts in the Kingston district, Ells, 367.

Canada—Continued.

Yukon Territory.

- Artesian well in the Klondike, Tyrrell, 1219.
- Gold mining in Arctic America, Penrose, 969.
- Macmillan River, Yukon district, McConnell, 830.
- White Horse district, Brewer, 126.

General.

- Blairmore-Frank coal fields, Leach, 779.
- Canadian geology, Evans, 379.
- Canadian graphite, Brumell, 135.
- Canadian specimens of Lituities, Whiteaves, 1306.
- Classification of the Archean, Coleman, 224.
- Composition and occurrence of petroleum, Mabery, 823.
- Cretaceous and Tertiary plants of Canada, Penhallow, 967.
- Development in size of the inarticulate brachiopods of the basal Cambrian, Matthew, 855.
- Did the upper Etcheminian fauna invade eastern Canada from the southeast?, Matthew, 856.
- First Eparchean formation, Ami, 27.
- Formation of sedimentary deposits, Wilson, 1334.
- Fossils from Mount Noyes (Canadian Rockies), Woodward, 1349.
- Geologische Reiseskizzen aus Nordamerika, Felix, 391.
- Geology of international boundary, Daly, 268.
- Gold production of North America, Lindgren, 802.
- Gold production of North America, Miller, 908.
- Isochiline from Canada, Jones, 655.
- Laurentian peneplain, Wilson, 1332.
- Life and work of the late Dr. Selwyn, Ami, 24.
- Metamorphism of the Laurentian limestones of Canada, Winchell, 1345.
- Molybdenite, Wells, 1292.
- Northeastern Canada to the Arctic coast, Hanbury, 499.
- Notes on specimens collected in the Canadian Rocky Mountains, Bonney, 99.
- Oboloid shells of the Cambrian system in Canada, Matthew, 854.
- Operations of Canada Geological Survey, Bell, 66.
- Osmundites skidegatenensis n. sp., Penhallow, 966.
- Paleontology and chronological geology, Ami, 22.
- Physical geography of northern Appalachian system, Dresser, 324.
- Rock specimens from the Canadian Rocky Mountains, Bonney, 100.
- Reconnaissance surveys of Four Rivers, Wilson, 1336.
- Stratigraphic position of Judith River beds, Hatcher and Stanton, 513.
- Submerged tributary to the pre-Glacial river of the Gulf of St. Lawrence, Poole, 976.
- Tertiary plants, Penhallow, 968.

Carboniferous.

Alaska.

- Carboniferous section in Copper River Valley, Mendenhall, 878.

Carboniferous—Continued.*Appalachian region.*

- Age of the Mercer group, White, 1299.
 Anthracite coal field west of Washington, White, 1298.
 Anthracite of Third Hill Mountain, West Virginia, Griffith, 486.
 Anticlinal folds near Meadville, Pa., Smallwood and Hopkins, 1122.
 Appalachian coal field, White, 1301.
 Brownsville-Connellsville folio, Campbell, 164.
 Coal Measures of bituminous regions of Pennsylvania, Adams, 11.
 Elkland-Tioga folio, Fuller and Alden, 424.
 Erratic boulder from the Coal Measures of Tennessee, McCallie, 826.
 Gaines folio, Fuller and Alden, 423.
 Geological excursion in Pittsburg region, Grant, 474.
 Lower Carboniferous of Appalachian basin, Stevenson, 1182.
 Original southern limit of anthracite beds, Lyman, 821.
 Pocono rocks in the Allegheny Valley, Campbell, 170.
 Steinkohlengebiete von Pennsylvanien und Westvirginien, Simmersbach, 1112.
 Variation and equivalence of the Charleston sandstone, Campbell, 166.

Canada.

- Carboniferous rocks of Chignecto Bay, Poole, 975.
 Meso-Carboniferous age of the Union and Riversdale formations, Nova Scotia, Ami, 26.

Great Basin region.

- Geology and copper deposits of Bisbee, Ransome, 994.
 Geology of Globe copper district, Ransome, 991.
 Geology of Nevada, Spurr, 1155.
 Hurricane fault in southwestern Utah, Huntington and Goldthwait, 623.
 Palaeozoic rocks of Great Basin region, Weeks, 1288.

Great Lakes region.

- Sub-Carboniferous limestone exposure at Grand Rapids, Whittemore, 1312.

Great Plains region.

- Carboniferous rocks of Kansas section, Adams, 10.
 Fossil insects in Permian of Kansas, Sellards, 1097.
 Fossil plants from Upper Carboniferous and Permian formations of Kansas, White, 1296.
 Fossil plants of Onaga, Crevecoeur, 246.
 Geology of Lyon County, Smith, 1123.
 Hartville folio, Smith, 1138.
 Invertebrate fossils from Carboniferous section of Kansas, Girty, 456.
 Red Beds of Black Hills, Richardson, 1015.
 Report of State geologist of Nebraska, Barbour, 56.

Carboniferous—Continued.*Mississippi Valley region.*

- Carboniferous fishes from central western States, Eastman, 337.
 Foraminiferal ooze in Coal Measures of Iowa, Udden, 1221.
 Geology of Mills and Fremont counties, Iowa, Udden, 1220.
 Geology of Missouri, Gallaher, 429.
 Geology of Monroe County, Iowa, Beyer and Young, 78.
 Geology of Tama County, Iowa, Savage, 1071.
New England and New York.
 Devonian and Carbonic formations of southwestern New York, Glenn, 459.
 Olean rock section, Clarke, 197.
Ohio Valley region.
 Columbia folio, Hayes and Ulrich, 533.
 Lower Carboniferous area in Indiana, Hopkins, 604.
 Lower Carboniferous area of southern Indiana, Ashley, 40.
 Nomenclature of Ohio geological formations, Prosser, 982.
 Section across southern Indiana, Newsom.

Pacific coast region.

- Klamath Mountain section, Diller, 302.
 Marine sediments of eastern Oregon, Washburne, 1265.

Rocky Mountain region.

- Carboniferous formations and faunas of Colorado, Girty, 455.

Southwestern region.

- Age of lavas of Plateau region, Reagan, 1004.
 Foraminiferal ooze, Udden, 1222.
 Geology of the Jemez-Albuquerque region, Reagan, 1003.
 Permian life of Texas, Sternberg, 1176.
 Stratigraphic relations of Red Beds, Adams, 6.
 Tishomingo folio, Taff, 1192.

General.

- Permian elements in the Dunkard flora, White, 1297.
 Permian question in America, Keyes, 682.

Cartography.

- Eastern Ohio oil fields, Griswold, 489.
 Relief of earth's surface, Curtis, 257.

Chemical analyses. a

- Actinolite, Clarke, 192.
 Actinolite, Julien, 656.
 Adamellite, Ransome, 991.
 Agirite, Clarke, 192.
 Albite, Clarke, 192.
 Allanite, Clarke, 192.
 Alunite, Clarke, 192.
 Alunogen, Clarke, 192.
 Amphibole, Clarke, 192.
 Amphibole, Harrington, 501.
 Amphibole, Weidman, 1290.
 Amphibole schist, Julien, 656.
 Amphibolite, Julien, 656.
 Analcite, Clarke, 192.
 Andesine rock, Kolderup, 703.

^aThe chemical analyses appearing in Washington's "Chemical Analyses of Igneous Rocks, published from 1884 to 1900," have not been listed.

Chemical analyses—Continued.

Andesite, Diller, 302.
 Andesite, Hogarty, 590.
 Andesite, Watson, 1270.
 Andradite, Simonds, 1113.
 Annite, Clarke, 192.
 Anorthite, Clarke, 192.
 Anorthoclase, Clarke, 192.
 Antlerite, Clarke, 192.
 Apatite, Clarke, 192.
 Apatite, Knight, 694.
 Apophyllite, Clarke, 192.
 Arfvedsonite, Weidman, 1290.
 Arsenic, Evans, 381.
 Artesian water, Blatchley, 90.
 Asbestos, Cirkel, 187.
 Ash, Barbour, 56.
 Asphalt, Buckley, 136.
 Asphaltum, Simonds, 1113.
 Astrophyllite, Clarke, 192.
 Augite, Clarke, 192.
 Augite-hornblende-syenite, Daly, 265.
 Axinite, Clarke, 192.
 Axinite, Ford, 415.
 Barkevikiite, Weidman, 1290.
 Basalt, Weed, 1279.
 Bastnäsite, Clarke, 192.
 Bauxite, Clarke, 192.
 Bergamaskite, Weidman, 1290.
 Beryl, Clarke, 192.
 Bindheimite, Clarke, 192.
 Biotite, Clarke, 192.
 Biotite-granite, Daly, 265.
 Bismuthinite, Clarke, 192.
 Boglime, Lane, 757.
 Bole, Clarke, 192.
 Boltonite, Clarke, 192.
 Boothite, Schaller, 1073.
 Bornite, Harrington, 502.
 Brochantite, Clarke, 192.
 Bröggerite, Clarke, 192.
 Bronzite, Clarke, 192.
 Brucite, Clarke, 192.
 Building stone, Shedd, 1100.
 Bytownite rock, Kolderup, 703.
 Calamine, Clarke, 192.
 Calaverite, Clarke, 192.
 Camptonite, Daly, 265.
 Cancrinite, Clarke, 192.
 Carnotite, Clarke, 192.
 Cement, Eckel, 345.
 Cement, Hillebrand, 573.
 Cement, Lane, 757.
 Cement, Smith, 1126.
 Cerussite, Warren, 1264.
 Chabazite, Clarke, 192.
 Chalcantite, Schaller, 1073.
 Chenevixite, Clarke, 192.
 Chert, Leith, 786.
 Chloritoid, Clarke, 192.
 Chromite, Clarke, 192.
 Chrysocolla, Palmer, 956.
 Chrysolite, Clarke, 192.
 Chrysotile, Clarke, 192.
 Cimolite, Clarke, 192.
 Clay, Buckley, 136.
 Clay, Eckel, 342.

Chemical analyses—Continued.

Clay, Fall, 386.
 Clay, Grant, 475.
 Clay, Lane, 757.
 Clay, Ries, 1024.
 Clay, Smith, 1126.
 Clay shale, Lane, 757.
 Cleveite, Clarke, 192.
 Clinochlore, Clarke, 192.
 Clinoelasite, Clarke, 192.
 Coal, Barbour, 56.
 Coal, Beyer and Young, 78.
 Coal, Collier, 229.
 Coal, Diller, 301.
 Coal, Fuller and Alden, 423.
 Coal, Heurteau, 559.
 Coal, Kirsopp, 693.
 Coal, Knight, 695.
 Coal, Landes and Ruddy, 753.
 Coal, Simonds, 1113.
 Coal, Von Rosenberg, 1250.
 Coal, White, 1301.
 Colemanite, Clarke, 192.
 Conichaleite, Clarke, 192.
 Copiapite, Clarke, 192.
 Copper carbonate, Gallaher, 429.
 Copper ore, Weed, 1279.
 Cordierite-hornfels, Daly, 265.
 Cordierite-hornstone, Leith, 786.
 Cosalite, Clarke, 192.
 Covellite, Clarke, 192.
 Cryolite, Clarke, 192.
 Cryophyllite, Clarke, 192.
 Cuprobismutite, Clarke, 192.
 Cuprodesclowitzite, Clarke, 192.
 Cuprodesclowitzite, Headden, 535.
 Cyrtolite, Clarke, 192.
 Dacite, Bergeat, 73.
 Dacite, Diller, 302.
 Dacite, Lindgren and Drake, 806.
 Dacite, Ransome, 991.
 Danburite, Clarke, 192.
 Datolite, Clarke, 192.
 Desclowitzite, Clarke, 192.
 Diabase, Daly, 265.
 Diabase greenstone, Julien, 656.
 Diabase, Ransome, 991.
 Diabase, Weed, 1279.
 Diallage, Clarke, 192.
 Diaspore, Clarke, 192.
 Diopside, Clarke, 192.
 Diorite, Daly, 265.
 Dolomite, Clarke, 192.
 Dumortierite, Clarke, 192.
 Egglestonite, Moses, 919.
 Elaeolite, Clarke, 192.
 Elpasolite, Clarke, 192.
 Embolite, Clarke, 192.
 Emmonsite, Clarke, 192.
 Enargite, Clarke, 192.
 Enstatite, Clarke, 192.
 Epidote, Clarke, 192.
 Epsomite, Schaller, 1073.
 Erikite, Böggild, 96.
 Erinite, Clarke, 192.
 Essexite, Adams, 3.
 Essexite, Daly, 265.

Chemical analyses—Continued.

Feldspar, Clarke, 192.
 Feldspar, Gallaher, 429.
 Fergusonite, Simonds, 1113.
 Fireclay, Gallaher, 429.
 Flint, Gallaher, 429.
 Freieslebenite, Clarke, 192.
 Fuchsite, Clarke, 192.
 Fuller's earth, Vaughan, 1245.
 Gabbro, Clements, 209.
 Gabbro, Julien, 656.
 Gabbro diorite, Julien, 656.
 Gabbro-porphry, Johnson, 648.
 Gadolinite, Clarke, 192.
 Gadolinite, Simonds, 1113.
 Gahnite, Clarke, 192.
 Galenite, Gallaher, 429.
 Garnet, Clarke, 192.
 Gearksutite, Clarke, 192.
 Genthite, Clarke, 192.
 Glaucinite, Clarke, 192, 194.
 Glaucinite, Leith, 786.
 Glaucophane schist, Julien, 656.
 Gold, Clarke, 192.
 Grahamite, Simonds, 1113.
 Granite, Brock, 131.
 Granite, Clements, 209.
 Granite, Henry, 551.
 Granite, Perry, 970.
 Granite, Shedd, 1100.
 Granite, Watson, 1272.
 Granite-porphry, Clements, 209.
 Granite-porphry, Ransome, 991.
 Granitite, Daly, 265.
 Granitite, Ransome, 991.
 Granodiorite, Daly, 265.
 Granodiorite, Ransome, 991.
 Greenalite, Clarke, 194.
 Greenalite rock, Leith, 786.
 Greenstone, Watson, 1270.
 Grorudite, Daly, 265.
 Grossularite, Clarke, 192.
 Guitermanite, Clarke, 192.
 Gypsum, Clarke, 192.
 Gypsum rock, Eckel, 351.
 Gypsum, Richardson, 1015.
 Gypsum, Wilder, 1316.
 Gyrolite, Clarke, 192.
 Halite, Clarke, 192.
 Hallite, Clarke, 192.
 Halloysite, Clarke, 192.
 Halotrichite, Clarke, 192.
 Hastingsite, Weidman, 1290.
 Hematite, Gallaher, 429.
 Hessite, Clarke, 192.
 Heulandite, Clarke, 192.
 Hornblende, Adams, 3.
 Hornblende, Clarke, 192.
 Hornblende-andesite, Watson, 1270.
 Hornblende-mica-andesite, Bergeat, 73.
 Hornblende-paisanite, Daly, 265.
 Hornblendite, Julien, 656.
 Hornblende schist, Julien, 656.
 Hübnerite, Clarke, 192.
 Hudsonite, Weidman, 1290.
 Hydronephelite, Clarke, 192.
 Hypersthene, Clarke, 192.

Chemical analyses—Continued.

Ilmenite, Clarke, 192.
 Ilvaite, Clarke, 192.
 Iron ore, Clements, 209.
 Iron ore, Fuller and Alden, 424.
 Iron ore, Gallaher, 429.
 Iron ore, Leith, 786.
 Iron ore, McCaskey, 829.
 Iron ore, Watson, 1272.
 Jade, Clarke, 192.
 Jadeite, Clarke, 192.
 Jarosite, Clarke, 192.
 Jefferisite, Clarke, 192.
 Jeffersonite, Clarke, 192.
 Josephinite, Clarke, 192.
 Kaolin, Gallaher, 429.
 Kaolinite, Clarke, 192.
 Kerrite, Clarke, 192.
 Knoxvillite, Clarke, 192.
 Kotschubeite, Clarke, 192.
 Kyanite, Clarke, 192.
 Labradorite rock, Kolderup, 703.
 Laumontite, Clarke, 192.
 Lawsonite, Clarke, 192.
 Lennilite, Clarke, 192.
 Lepidolite, Clarke, 192.
 Lepidomelane, Clarke, 192.
 Lestivarite, Daly, 265.
 Leucite, Clarke, 192.
 Leuchtenbergite, Clarke, 192.
 Levynite, Clarke, 192.
 Lignite, Simonds, 1113.
 Limburgite, Johnson, 648.
 Limestone, Alden, 13.
 Limestone, Ashley, 40.
 Limestone, Buckley, 136.
 Limestone, Duryee, 333.
 Limestone, Eckel, 342.
 Limestone, Gallaher, 429.
 Limestone, Hlseng, 628.
 Limestone, Miller, 907.
 Limestone, Newsom, 929.
 Limestone, Smith, 1126.
 Limonite, Gallaher, 429.
 Limonite, Simonds, 1113.
 Lithographic limestone, Hoen, 589.
 Loess, Fuller and Clapp, 426.
 Loess, Gallaher, 429.
 Löllingite, Clarke, 192.
 Lucasite, Clarke, 192.
 Ludwigite, Clarke, 192.
 Mackintoshite, Clarke, 192.
 Mackintoshite, Simonds, 1113.
 Magnetite, Clarke, 192.
 Magnetite, Leith, 786.
 Magnetite, Simonds, 1113.
 Manganese ore, Gallaher, 429.
 Manganese ore, Watson, 1272.
 Manganese ore, Williams, 1319.
 Marble, Shedd, 1100.
 Margarite, Clarke, 192.
 Mariposite, Clarke, 192.
 Marl, Buckley, 136.
 Marl, Davis, 275.
 Marl, Eckel, 342.
 Marl, Fall, 386.
 Marl (bog lime), Hale, 492.

Chemical analyses—Continued.

Marl, Lane, 757.
 Melanterite, Schaller, 1073.
 Melonite, Clarke, 192.
 Mesolite, Clarke, 192.
 Meta-andesite, Watson, 1270.
 Metacinnabarite, Clarke, 192.
 Metarhyolite, Diller, 305.
 Meteoric iron, Simonds, 1113.
 Meteorite, Campbell and Howe, 163.
 Meteorite, Cohen, 220, 221, 222.
 Meteorite, Hobbs, 581.
 Mica-andesite, Blake, 81.
 Microcline, Clarke, 192.
 Mineral water, Gallaher, 429.
 Mineral water, Richardson, 1015.
 Mineral waters, Lee, 788.
 Mineral waters, Reagan, 1003.
 Mineral wool, Eckel, 349.
 Mixite, Clarke, 192.
 Mizzonite, Clarke, 192.
 Molybdenite, Wells, 1292.
 Montroydite, Moses, 919.
 Monzonite, Daly, 265.
 Monzonite, Ransome, 991.
 Muscovite, Clarke, 192.
 Natrojarosite, Clarke, 192.
 Natrolite, Clarke, 192.
 Natural gas, Bownocker, 117.
 Nephelite, Clarke, 192.
 Nephrite, Clarke, 192.
 Niter, Clarke, 192.
 Nivenite, Clarke, 192.
 Nordmarkite, Adams, 3.
 Nordmarkite, Daly, 265.
 Ocher, Watson, 1271.
 Oligoclase, Clarke, 192.
 Oligoclase rock, Kolderup, 703.
 Olivinite, Clarke, 192.
 Olivine, Clarke, 192.
 Olivinite, Whitaker, 1294.
 Orthoclase, Clarke, 192.
 Pachnolite, Clarke, 192.
 Paint rock, Leith, 786.
 Painterite, Clarke, 192.
 Palacheite, Eakle, 335.
 Palagonite tuff, Julien, 656.
 Peat, Ries, 1025.
 Pectolite, Clarke, 192.
 Peridotite, Lawson, 775.
 Petalite, Clarke, 192.
 Petroleum, Heurteau, 560.
 Petroleum, Hill, 568.
 Petroleum, Knight and Slosson, 697.
 Petroleum, Simonds, 1113.
 Petzite, Clarke, 192.
 Phlogopite, Clarke, 192.
 Phosphate rock, Ruhm, 1047.
 Pierallumogene, Clarke, 192.
 Pierolite, Clarke, 192.
 Pierotitanite, Whitaker, 1294.
 Piedmontite, Clarke, 192.
 Pisanite, Clarke, 192.
 Pisanite, Schaller, 1073.
 Plagioclase basalt, Johnson, 648.
 Pleonaste, Clarke, 192.
 Plumasite, Lawson, 775.

Chemical analyses—Continued.

Plumbojarosite, Clarke, 192.
 Polydymite, Clarke, 192.
 Porphyry, Gallaher, 429.
 Portland cement, Eckel, 342.
 Portland cement, Eckel, 349.
 Powellite, Clarke, 192.
 Prehnite, Clarke, 192.
 Prochlorite, Clarke, 192.
 Prosopite, Clarke, 192.
 Protovermiculite, Clarke, 192.
 Pseudo-diorite, Julien, 656.
 Psilomelane, Clarke, 192.
 Ptilolite, Clarke, 192.
 Pulaskite, Adams, 3.
 Pulaskite, Brock, 131.
 Pulaskite, Daly, 265.
 Pumice, Bergeat, 73.
 Pyrite, Eckel, 348.
 Pyrite, Winchell, 1339.
 Pyrope, Clarke, 192.
 Pyrophyllite, Clarke, 192.
 Pyroxene, Clarke, 192.
 Pyroxene, Winchell, 1337.
 Pyroxene andesite, Watson, 1270.
 Pyrrhotite, Dickson, 297.
 Quartzite, Watson, 1272.
 Quartz-mica-diorite, Ransome, 991.
 Quartz-monzonite, Daly, 265.
 Quartz-monzonite, Ransome, 991.
 Quartz-porphyry, Perry, 970.
 Quartz-sericite-schist, Daly, 265.
 Redingtonite, Clarke, 192.
 Rhyolite, Duryee, 333.
 Rhyolite, Lindgren and Drake, 806.
 Rickardite, Ford, 414.
 Roscoelite, Clarke, 192.
 Rowlandite, Clarke, 192.
 Rowlandite, Simonds, 1113.
 Rutile, Clarke, 192.
 Samarskite, Clarke, 192.
 Sand, molding, Eckel, 346.
 Sandstone, Ihlseng, 628.
 Sandstone, Shedd, 1100.
 Saussurite, Clarke, 192.
 Schalstein, Julien, 656.
 Schizolite, Böggild, 96.
 Scolecite, Clarke, 192.
 Scordite, Clarke, 192.
 Serpentine, Clarke, 192, 193.
 Serpentine, Shedd, 1100.
 Shale, Eckel, 342.
 Shale, Ihlseng, 628.
 Shale, Richardson, 1015.
 Shale, Watson, 1272.
 Shale, Weed, 1279.
 Shale, bituminous, Parks, 958.
 Silica powder, Leith, 786.
 Sillimanite, Clarke, 192.
 Slag, Eckel, 349.
 Slag cement, Eckel, 349.
 Slate, Leith, 786.
 Smithsonite, Clarke, 192.
 Soda niter, Clarke, 192.
 Sodinite, Clarke, 192.
 Sodinite-syenite, Adams, 3.
 Soils, Barbour, 56.

Chemical analyses—Continued.

Soils, Reagan, 1003.
 Spessartite, Clarke, 192.
 Spessartite, Simonds, 1113.
 Spinel, Clarke, 192.
 Spodumene, Schaller, 1073.
 Staurolite, Clarke, 192.
 Stilbite, Clarke, 192.
 Stromeyerite, Clarke, 192.
 Talc, Clarke, 192.
 Tephroite, Simonds, 1113.
 Terlinguaite, Moses, 919.
 Theralite, Adams, 3.
 Thomsonite, Clarke, 192.
 Thorogummite, Simonds, 1113.
 Titanite, Clarke, 192.
 Topaz, Clarke, 192.
 Tourmaline, Clarke, 192.
 Trachyte, Breed, 122.
 Trap, Weed, 1279.
 Tremolite, Clarke, 192.
 Triplite, Clarke, 192.
 Tscheffkinite, Clarke, 192.
 Tufa, Weed, 1274.
 Tuff, Diller, 302.
 Tuff, Shedd, 1100.
 Turquoise, Clarke, 192.
 Turquoise, Johnson, 648.
 Tyrolite, Clarke, 192.
 Tysonite, Clarke, 192.
 Ulexite, Clarke, 192.
 Umptekite, Adams, 3.
 Uralite, Weidman, 1290.
 Uraninite, Clarke, 192.
 Urao, Clarke, 192.
 Vermiculite, Clarke, 192.
 Vesuvianite, Clarke, 192.
 Vesuvianite, Kunz, 708.
 Volcanic ash, Gillot, 451.
 Volcanic ash, Loble, 807.
 Volcanic ash, Rowe, 1038.
 Volcanic dust, Bridgford, 129.
 Volcanic dust, Griffiths, 487.
 Waluwite, Clarke, 192.
 Warrenite, Clarke, 192.
 Warwickite, Clarke, 192.
 Water, Eisele, 356.
 Water, Gallaher, 429.
 Water, Harwood, 506.
 Water, Russell, 1048.
 Water, Weed, 1274.
 Water (of streams), Headden, 536.
 Windsorite, Daly, 265.
 Wollastonite, Clarke, 192.
 Xanthitane, Clarke, 192.
 Xanthophyllite, Clarke, 192.
 Xenotime, Clarke, 192.
 Yttrialite, Clarke, 192.
 Yttrialite, Simonds, 1113.
 Zinkenite, Clarke, 192.
 Zoisite, Clarke, 192.
 Zoisite amphibolite, Julien, 656.
 Zunyite, Clarke, 192.

Classification.

Classification of New York geologic formations, Clarke, 201.
 Classification of the Archean, Coleman, 224.
 Geology of eastern New York, Prosser, 983.

Colorado.

Across the San Juan Mountains, Rickard, 1017.
 Aguilar coal and oil district, Lakes, 728.
 Andesite of Mount Sugar Loaf, Hogarty, 590.
 Barela Mesa coal field, McLaughlin, 835.
 Basaltic zones as guides to ore deposits, Stevens, 1181.
 Boulder oil field, Fenneman, 392.
 Camp Bird gold mine, Titcomb, 1204.
 Camp Bird mine, Ouray, Purington, 986.
 Carboniferous formations and faunas of Colorado, Girty, 455.
 Coal and asphalt deposits along Moffat railway, Lakes, 749.
 Coal and mineral resources of Routt County, Parsons and Liddell, 959.
 Coal on Turkey Creek, Stone, 1189.
 Colorado Central lode, Foster, 416.
 Colorado: Report of State Bureau of Mines, Lee, 783.
 Copper deposits at Pearl, Spencer, 1150.
 Creede mining camp, Lakes, 739.
 Development of pseudomorphs, Patton, 960.
 Genesis of ore deposits in Boulder County, Bagg, 48.
 Geological structure of Camp Bird vein, Purington, 988.
 Geology and economics along Moffat railway, Lakes, 738.
 Geology of the oil fields of Colorado, Lakes, 750.
 Geology of Virginus mine, Purington, 990.
 Gold production of North America, Austin, 46.
 Gold production of North America, Lindgren, 802.
 Granite of west Sugar Loaf Mountain, Henry, 551.
 Hanging valleys of Georgetown, Crosby, 247.
 La Plata Mountains, Lakes, 730.
 Lodes of Cripple Creek, Rickard, 1018, 1022.
 Mica-andesite of west Sugar Loaf Mountain, Blake, 80.
 Mineralogical mistake, Van Diest, 1235.
 Mineralogical notes, Headden, 535.
 Mineralogical notes, Warren, 1264.
 Mines and ore deposits of the Rosita and Silver Cliff mining district, Lakes, 742.
 Mines of Ouray County, Downer and De Cou, 322.
 New genus and species from Jurassic of Colorado, Hay, 515.
 New sauropod dinosaur from Jurassic of Colorado, Hatcher, 511.
 Nodular-bearing schists near Pearl, Read, 1001.
 Oil situation in Colorado, Lakes, 737.
 Olivinite dike of Magnolia district, Whitaker, 1294.
 Ore deposits of the American-Nettie mine, Ouray, Downer, 321.
 Ore occurrence at Leadville, Robbins, 1032.
 Overturns in the Denver basins, Henderson, 549.
 Reconnaissance in the Cache a la Poudre Valley, Means, 870.
 Redcliff ore deposits, Lakes, 733.
 Ricardite, Ford, 414.

Colorado—Continued.

- Secondary enrichment at Cripple Creek, Weed, 1282.
 Silver Lake mine, Lakes, 736.
 Soil survey of the lower Arkansas Valley, Lapham, 771.
 Soils of Colorado, Lakes, 729.
 Summit County placers, Lakes, 732.
 Sunset trachyte, Breed, 722.
 Tellurium veins in La Plata Mountains, Austin, 42.
 Veins of Boulder and Kalgoorlie, Rickard, 1021.
 Veins of Boulder County, Bagg, 49.

Connecticut.

- Clays of the United States, Ries, 1024.
 Post-Newark normal faulting in the crystalline rocks of southwestern New England, Hobbs, 587.
 Soil survey in the Connecticut Valley, Dorsey and Bonsteel, 310.
 Trap rock of Connecticut Valley, Ford, 413.
 Tungsten mining at Trumbull, Hobbs, 582.

Correlation.

- Carboniferous ammonoids of America, Smith, 1137.
 Classification of the Archean, Coleman, 224.
 Cobleskill limestone of New York, Hartnagel, 505.
 Columbia folio, Hayes and Ulrich, 533.
 Correlation of geological faunas, Williams, 1321.
 Correlation of John Day and Mascall, Merriam and Sinclair, 886.
 Correlation of the Potomac formation in Maryland and Virginia, Ward, 1261.
 Fresh-water faunule from Cretaceous of Montana, Stanton, 1166.
 Geology of eastern New York, Prosser, 983.
 Hamilton formation in central New York, Cleland, 207.
 Mesabi iron-bearing district of Minnesota, Leith, 786.
 Methods of geologic correlation, Keyes, 687.
 Mollusca of Buda limestone, Shattuck, 1098.
 Paleozoic faunas, Weller, 1291.
 Petrography and age of the Northumberland rock, Cushing, 259.

Cretaceous.*Atlantic coast region.*

- Columbia University Geological Department, Shimer, 1110.
 Correlation of the Potomac formation, Ward, 1261.
 Cretaceous-Eocene boundary in the Atlantic coastal plain, Clark, 190.
 Flora of the Matawan formation, Berry, 76.
 Results of resurvey of Long Island, Fuller and Veatch, 427.

Canada.

- Age of Lance Creek beds of Wyoming, Judith River beds of Montana, and Belly River beds of Canada, Hatcher, 510.

Great Basin region.

- Geology and copper deposits of Bisbee, Ransome, 994.
 Geology of Nevada, Spurr, 1155.

Cretaceous—Continued.*Great Plains region.*

- Age of Atlantosaurus beds, Lee, 785.
 Age of Lance Creek beds of Wyoming, Judith River beds of Montana, and Belly River beds of Canada, Hatcher, 510.
 Alexandria folio, Todd and Hall, 1211.
 Coal fields of Kansas, Crane, 244.
 Hartville folio, Smith, 1138.
 Jefferson County, Nebraska, Carmony, 171.
 Judith River beds, Hatcher, 512.
 Leucite hills of Wyoming, Kemp and Knight, 677.
 Mitchell folio, Todd, 1210.
 Olivet folio, Todd, 1208.
 Parker folio, Todd, 1209.
 Recent zoopalaeontology, Osborn, 950.
 Report of State geologist of Nebraska, Barbour, 56.
 Studies in the Mentor beds, Jones, 653.

Gulf region.

- Portland cement materials of Alabama, Smith, 1126.

Mexico.

- Coal mines at Las Esperanzas, Ries, 1027.

Mississippi Valley region.

- Geology of Mills and Fremont counties, Iowa, Udden, 1220.
 Geology of Minnesota, Hall, 495.

New England and New York.

- Results of resurvey of Long Island, Fuller and Veatch, 427.

Pacific coast region.

- Klamath Mountain section, Diller, 302.
 Marine sediments of eastern Oregon, Washburne, 1265.
 Port Orford folio, Diller, 301.

Rocky Mountain region.

- Age of Lance Creek beds of Wyoming, Judith River beds of Montana, and Belly River beds of Canada, Hatcher, 510.
 Coal fields of Uinta County, Wyoming, Knight, 695.
 Coal on Turkey Creek, Colorado, Stone, 1189.
 Fresh-water molluscan faunule from Cretaceous of Montana, Stanton, 1166.
 Stratigraphic position of Judith River beds, Hatcher and Stanton, 513.

Southwestern region.

- Geology of the Cerrillos Hills, Johnson, 646, 647.
 Geology of the Jemez-Albuquerque region, Reagan, 1003.
 Mollusca of Buda limestone, Shattuck, 1098.
 Tishomingo folio, Taff, 1192.

General.

- Recent literature on Laramie formation, Hay, 514.
 Recent zoopalaeontology, Osborn, 949.

Delaware.

- Clays of the United States, Ries, 1024.

Devonian.*Appalachian region.*

- Devonian era in Ohio basin, Claypole, 206.
 Devonian and Ontario formations of Maryland, Schuchert, 1092.
 Elkland-Tioga folio, Fuller and Alden, 424.

Devonian—Continued.*Appalachian region—Continued.*

Gaines folio, Fuller and Alden, 423.

Paleozoic faunas, Weller, 1291.

Shifting of faunas, Williams, 1320.

Canada.

Fossiliferous rocks of southwest Ontario, Parks, 958.

Geology of St. Helens Island, Nolan and Dixon, 933.

Great Basin region.

Geology and copper deposits of Bisbee, Ransome, 994.

Geology of Globe copper district, Ransome, 991.

Geology of Nevada, Spurr, 1155.

Paleozoic rocks of Great Basin region, Weeks, 1288.

Great Lakes region.

Paleozoic coral reefs, Grabau, 466.

Traverse group of Michigan, Grabau, 471.

Mississippi Valley region.

Geology of Chickasaw County, Iowa, Calvin, 159.

Geology of Howard County, Iowa, Calvin, 158.

Geology of Minnesota, Hall, 495.

Geology of Missouri, Gallaher, 429.

Geology of Mitchell County, Iowa, Calvin, 160.

Geology of Tama County, Iowa, Savage, 1071.

New England and New York.

Correlation of geological faunas, Williams, 1321.

Devonic and Carbonic formations of southwestern New York, Glenn, 459.

Drift fossils, Hollick, 594.

Dwarf fauna of Tully limestone, Loomis, 809.

Fauna of Agoniatite limestone of Onondaga County, N. Y., Wilson, 1335.

Fauna of Stafford limestone, Talbot, 1193.

Geology of eastern New York, Prosser, 983.

Geology of Onondaga County, N. Y., Schneider, 1077.

Naples fauna in western New York, Clarke, 200.

Olean rock section, Clarke, 197.

Origin of limestone faunas of the Marcellus shales of New York, Clarke, 202.

Oriskany sandstone, Wheelock, 1293.

Paleozoic coral reefs, Grabau, 466.

Rocks of Rondout, Van Ingen and Clark, 1240.

Shifting of faunas, Williams, 1320.

Stratigraphy of Becraft Mountain, Grabau, 465.

Stratigraphy of Portage formation, Luther, 820.

Ohio Valley region.

Bearing of Clinton and Osgood formations on age of Cincinnati anticline, Foerste, 411.

Columbia folio, Hayes and Ulrich, 533.

Devonian era in Ohio basin, Claypole, 206.

Field geology in Ohio State University, Mead, 868.

Nomenclature of Ohio geological formations, Prosser, 982.

Ohio natural-gas fields, Bownocker, 117.

Devonian—Continued.*Ohio Valley region—Continued.*

Petroleum and natural gas in Ohio, Bownocker, 117a.

Section across southern Indiana, Newsom, 929.

Silurian and Devonian limestones of western Tennessee, Foerste, 408.

Pacific coast region.

Klamath Mountain section, Diller, 302.

Rocky Mountain region.

Carboniferous formations and faunas of Colorado, Girty, 455.

Southwestern region.

Geology of Fort Apache region, Reagan, 1005.

Tishomingo folio, Taff, 1192.

General.

Faunal provinces of middle Devonian of America, Schuchert, 1090.

District of Columbia.

Clays of the United States, Ries, 1024.

Dynamic and structural geology (geographic divisions).*Appalachian region.*

Anticlinal folds near Meadville, Pa., Smallwood and Hopkins, 1122.

Geographic development of northern Pennsylvania and southern New York, Campbell, 165.

Recent work in the bituminous coal field of Pennsylvania, Campbell, 167.

Canada.

Frank disaster, Fernie, 393.

Frank disaster, Green, 479.

Frank disaster, Smith, 1128.

Rock-slide at Alberta, Brewer, 125.

Central America.

Ausbruch des Vulkans St. Maria, Sapper, 1056.

Earthquake and volcanic eruption in Guatemala, Eisen, 357.

Recent earthquakes, Roekstroh, 1034.

Volcanic eruptions in Guatemala, Winterton, 1347.

Vulkan Izalco, Sapper, 1057.

Great Basin region.

Basin-range structure in the Death Valley region, Campbell, 169.

Hurricane fault in southwestern Utah, Huntington and Goldthwait, 623.

Joint veins, Gilbert, 445.

Mountain ranges of Great Basin, Davis, 283.

Origin of Basin ranges, Gilbert, 448.

Plateau province of Utah and Arizona, Davis, 282.

Great Lakes region.

Delta of St. Clair River, Cole, 223.

Ellipsoidal structure in pre-Cambrian rocks of Lake Superior region, Clements, 210.

Hawaiian Islands.

Mohokea caldera on Hawaii, Hitchcock, 576.

Mexico.

Eruptions du volcan de Colima, Ordoñez, 944.

Eruptions of Colima, Arreola, 39.

Volcan de Taeaná, Böse, 114.

Volcanes de Zaeapu, Ordoñez, 943.

Xinantecatl volcan Nevado de Toluca, Ordoñez, 941.

Dynamic and structural geology—Continued.

New England and New York.

- Ames Knob, North Haven, Me., Willis, 1323.
- Eruptive dikes near Ithaca, Schneider, 1082.
- Geologic features within the 8,000-acre grant, Sheldon and Sheldon, 1101.
- Geological structure of southwestern New England, Hobbs, 580.
- Geology of Asectuey Mountain, Daly, 265.
- Geology of the serpentines of central New York, Schneider, 1081.
- Marcellus fault, Schneider, 1079.
- Rocks of Rondout, Van Ingen and Clark, 1240.

Ohio Valley region.

- Lead, zinc, and fluorspar deposits of western Kentucky, Ulrich and Smith, 1223.

Pacific coast region.

- Anticlinal mountain ridges in central Washington, Smith, 1131.
- Clastic dikes, Newsom, 930.
- Ellensburg folio, Smith, 1131.
- Origin of transverse mountain valleys, Le Conte, 782.
- Post-Tertiary elevation of the Sierra Nevada, Turner, 1214.
- Structure of Klamath Mountains, Hershey, 551.

Rocky Mountain region.

- Hanging valleys of Georgetown, Crosby, 247.
- Overturms in the Denver basins, Henderson, 549.
- Recent earth movements, Lakes, 731.

Southwestern region.

- Block Mountains in New Mexico, Johnson, 649.

West Indies.

- Activity of Mont Pelée, Heilprin, 545.
- Composition des gaz des fumeroles du Mont Pelée, Gautier, 437.
- Erosion phenomena on Mont Pelée and Soufrière, Hovey, 615.
- Éruption de la Martinique, Lacroix and others, 727.
- Éruption de la Montagne Pelée, Lacroix, 720.
- Éruption du volcan de Saint-Vincent, Lacroix, 722.
- Eruption volcanique à la Martinique, Thierry, 1202.
- Éruptions des nuages de la Montagne Pelée, Lacroix, 719.
- Éruptions de Saint-Vincent, Lacroix, 726.
- Eruptions of Soufrière, Anderson and Flett, 33.
- Éruptions volcaniques de la Martinique, Lacroix, 718.
- État actuel du volcan de la Montagne Pelée, Lacroix, 715.
- État actuel de la Soufrière de la Guadeloupe, Lacroix, 721.
- Gaz des fumeroles du Mont Pelée, Moissan, 913.
- Geological features of Azores, Howarth, 617.
- Geological relationship of volcanoes of West Indies, Spencer, 1152.
- Inner cone of Mont Pelée, Hovey, 614.
- Krater der Soufrière von St. Vincent, Sapper, 1066.
- Martinique, Sapper, 1065.

Dynamic and structural geology—Continued.

West Indies—Continued.

- Martinique and St. Vincent revisited, Hovey, 609.
- Mission de la Martinique, Lacroix, 711, 723.
- Mont Pelée, Jaggar, 633.
- Mont Pelée and tragedy of West Indies, Heilprin, 544.
- Mont Pelée—the eruptions of August 24 and 30, 1902, Heilprin, 548.
- Nature of phenomena of eruption of Mont Pelée, Divers, 306.
- New cone of Mont Pelé, Hovey, 608.
- Obelisk of Mont Pelé, Hovey, 612.
- Obelisk of Mont Pelée, Heilprin, 547.
- Obelisk of Montagne Pelée, Heilprin, 546.
- Observations sur les éruptions volcaniques, Lacroix, 714.
- Mont Pelé, Hovey, 611.
- Pelé obelisk, Russell, 1052.
- Pelé's obelisk, Argall, 35.
- Recent tuffs of the Soufrière, Howe, 618.
- Recent volcanic eruptions, Anderson, 30.
- Secondary phenomena of West Indian volcanic eruptions, Curtis, 255.
- Volcanic action and the West Indian eruptions of 1902, Lobley, 807.
- Volcanic eruptions in the West Indies, Anderson, 31.
- Volcanoes of Caribbean Islands, Hovey, 613.
- West Indian eruptions of 1902, Curtis, 256.
- West Indian volcanic eruptions, Milne, 911.

Dynamic and structural geology (divisions by subject-matter).

Deformation.

- Geographic development of northern Pennsylvania and southern New York, Campbell, 165.
- Niagara domes of northern Indiana, Kindle, 689.
- Physiography and deformation of the Watahchee-Chelan district, Willis, 1322.

Earthquakes.

- Earthquake and volcanic eruption in Guatemala, Eisen, 357.
- Erdbebenherde und Schüttergebiete von Nord-Amerika, Deckert, 293.
- Les États-Unis sismiques, Montessus de Ballore, 914.
- Recent earthquakes in Guatemala, Rockstroh, 1034.

Erosion.

- Dalles of the St. Croix, Berkey, 74.
- Development of river meanders, Davis, 284.
- Drift ice as a transporting agent, Prest, 978.
- Ellensburg folio, Smith, 1131.
- Erosion by flying sand on beaches of Cape Cod, Julien, 657.
- Erosion phenomena on Mont Pelée and Soufrière, Hovey, 615.
- Living plants as geological factors, Shimek, 1106.
- Mountain ranges of Great Basin, Davis, 283.
- Northward flow of ancient Beaver River, Hice, 564.
- Origin of pebble-covered plains in desert regions, Blake, 85.

Dynamic and structural geology—Continued.*Erosion—Continued.*

Past and future of Niagara Falls, Upham, 1234.

Sea and mining, Lakes, 746.

Story of Niagara, Hitchcock, 578.

Faulting.

Block Mountains in New Mexico, Johnson, 649.

Cross-vein ore-shoots and fractures, Weed, 1283.

Geological structure of southwestern New England, Hobbs, 580.

Geology of Globe copper district, Ransome, 991.

Hurricane fault in southwestern Utah, Huntington and Goldthwait, 623.

Lead, zinc, and fluorspar deposits of western Kentucky, Ulrich and Smith, 1223.

Marcellus fault, Schneider, 1079.

Mountain ranges of Great Basin, Davis, 283.

Origin of transverse mountain valleys, Le Conte, 782.

Plateau province of Utah and Arizona, Davis, 282.

Post-Newark normal faulting in the crystalline rocks of southwestern New England, Hobbs, 586.

Relation of faults to topography, Spurr, 1165.

Rocks of Rondout, Van Ingen and Clark, 1240.

Folding.

Anticlinal folds near Meadville, Pa., Smallwood and Hopkins, 1122.

Anticlinal mountain ridges in central Washington, Smith, 1134.

Basin-range structure in Death Valley region, Campbell, 169.

Ellensburg folio, Smith, 1131.

Geological structure of southwestern New England, Hobbs, 580.

Marcellus fault, Schneider, 1079.

Overtures in the Denver basins, Henderson, 549.

Recent work in the bituminous coal field of Pennsylvania, Campbell, 167.

Structure of Klamath Mountains, Hershey, 554.

Syncline as a structural type, Rickard, 1020.

Glaciers.

Stages of a tidal glacier, Gilbert, 419.

Struktur des grönländischen Inlandeises, Mücke, 922.

Translationsfähigkeit des Eises, Mücke, 923.

Intrusion.

Eruption of rhyolite, Gilbert, 446.

Eruptive dikes near Ithaca, Schneider, 1082.

Geology of the serpentines of central New York, Schneider, 1081.

Mechanics of igneous intrusion, Daly, 266.

Jointing.

Geological structure of southwestern New England, Hobbs, 580.

Joint veins, Gilbert, 445.

Landslides.

Frank disaster, Fernie, 393.

Frank disaster, Green, 479.

Frank disaster, Smith, 1128.

Dynamic and structural geology—Continued.*Landslides—Continued.*

Landslide in Chaco Cañon, Dodge, 309.

Rock slide at Alberta, Brewer, 125.

Turtle Mountain rock slide, Dowlen, 318.

Magmatic differentiation.

Geology of Aseutney Mountain, Daly, 265.

Size of grain in igneous rocks, Lane, 761.

Igneous rocks and their segregation, Spurr, 1161.

Metamorphism.

Geology of Aseutney Mountain, Daly, 265.

Ore formation.

Chemistry of ore deposition, Jenney, 637.

Deposition of ores from an igneous magma, Stevenson, 1185.

Differentiation of igneous magmas and the formation of ores, Kemp, 668.

Igneous rocks and circulating waters as factors in ore deposition, Kemp, 665.

Mineral crest, Jenney, 636.

Ore deposition and vein enrichment, Weed, 1281.

Ore deposits near igneous contacts, Weed, 1280.

Rock segregation and ore deposition, Stevens, 1180.

Oscillation.

Ames Knob, North Haven, Maine, Willis, 1323.

Post-Newark depression and subsequent elevation within the area of southwestern New England, Hobbs, 586.

Post-Tertiary elevation of the Sierra Nevada, Turner, 1214.

Recent earth movements, Lakes, 731.

Sedimentation.

Accretion of flood plains by sand bars, Simpson, 1114.

Concretions and their geological effects, Todd, 1205.

Delta of St. Clair River, Cole, 223.

Geological relationship of volcanoes of West Indies, Spencer, 1152.

Geology of Charles River estuary, Crosby, 248.

Loess in the Missouri Valley, Wright, 1361.

Origin of bedded breccias in Arkansas, Adams, 9.

Samples of sea floor along coast of Greenland, Böggild, 97.

Sea and mining, Lakes, 746.

Theory of formation of sedimentary deposits, Wilson, 1334.

Underground temperature.

Distribution of the internal heat of the earth, Chamberlin, 182.

Investigation of subterranean temperatures and gradients, Gilbert, 443.

Variation of geothermal gradient in Michigan, Lane, 764.

Volcanoes.

Activity of Mont Pelée, Heilprin, 545.

Ausbruch des Vulkans St. Maria, Sapper, 1056.

Composition des gaz des fumarolles du Mont Pelée, Gautier, 437.

Earthquake and volcanic eruption in Guatemala, Eisen, 357.

Dynamic and structural geology—Continued.*Volcanoes—Continued.*

- Eruption de la Martinique, Lacroix and others, 727.
 Éruption de la Montagne Pelée, Lacroix, 720.
 Éruption du volcan de Saint-Vincent, Lacroix, 722.
 Éruption volcanique à la Martinique, Thierry, 1202.
 Éruptions de Saint-Vincent, Lacroix, 726.
 Éruptions des nuages de la Montagne Pelée, Lacroix, 719.
 Éruptions du volcan de Colima, Ordoñez, 944.
 Eruptions of Colima, Arreola, 39.
 Eruptions of Soufrière, Anderson and Flett, 33.
 Éruptions volcaniques de la Martinique, Lacroix, 718.
 État actuel de la Soufrière de la Guadeloupe, Lacroix, 721.
 État actuel du volcan de la Montagne Pelée, Lacroix, 715.
 Gaz des fumerolles du Mont Pelée, Moissan, 913.
 Geological features of Azores, Howarth, 617.
 Geological relationship of volcanoes of West Indies, Spencer, 1152.
 Geology of Crater Lake, Diller, 300.
 Inner cone of Mont Pelée, Hovey, 614.
 Krater der Soufrière von St. Vincent, Sapper, 1066.
 Martinique, Sapper, 1065.
 Martinique and St. Vincent revisited, Hovey, 609.
 Mission de la Martinique, Lacroix, 711, 723.
 Mohokea caldera on Hawaii, Hitchcock, 576.
 Mont Pelé, Hovey, 611.
 Mont Pelée, Jaggard, 633.
 Mont Pelée and tragedy of Martinique, Heilprin, 544.
 Mont Pelée—the eruptions of August 24 and 30, 1902, Heilprin, 548.
 Mount Pelée, Hovey, 610.
 Mount Pelee, Jefferson, 634.
 Mud volcanoes, Lakes, 747.
 Nature of phenomena of eruption of Mont Pelée, Divers, 306.
 New cone of Mont Pelé, Hovey, 608.
 Obelisk of Mont Pelé, Hovey, 612.
 Obelisk of Mont Pelée, Heilprin, 547.
 Obelisk of Montagne Pelée, Heilprin, 546.
 Observations sur les éruptions volcaniques, Lacroix, 714.
 Origine de l'activité volcanique, Meunier, 898.
 Pelé obelisk, Russell, 1052.
 Pelée's obelisk, Argall, 35.
 Recent tuffs of the Soufrière, Howe, 618.
 Recent volcanic eruptions, Anderson, 30.
 Secondary phenomena of West Indian volcanic eruptions, Curtis, 255.
 Volcan de Tacana, Böse, 114.
 Volcanes de Zacapu, Ordoñez, 943.
 Volcanic action and the West Indian eruptions of 1902, Lobley, 807.
 Volcanic eruptions in Guatemala, Winterton, 1347.

Dynamic and structural geology—Continued.*Volcanoes—Continued.*

- Volcanic eruptions in the West Indies, Anderson, 31.
 Volcanoes of Caribbean Islands, Hovey, 613.
 Vulkan Izalco, Sapper, 1057.
 West Indian eruptions of 1902, Curtis, 256.
 West Indian volcanic eruptions, Milne, 911.
 Xinantacatl ou volcan Nevado de Toluca, Ordoñez, 941.

Weathering.

- Action of frost on soil, Roberts, 1033.

General.

- Arroyo formation, Dodge, 309.
 Clastic dikes, Newsom, 930.
 Current notes on physiography, Davis, 279.
 Ellipsoidal structure in pre-Cambrian rocks of Lake Superior region, Clements, 210.
 Geologic deposition of hydrocarbons, Adams, 5.
 Geologic features within the 8,000-acre grant, Sheldon and Sheldon, 1101.
 Geological changes now going on, Lane, 762.
 Geologizing by the seaside, Lakes, 745.
 Has the rate of rotation of the earth changed appreciably during geological history? Chamberlin, 183.
 Origin of coral reefs, Gardiner, 431.
 Origin of gypsum deposits, Sherwin, 1104.
 Origin of ocean basins on planetesimal hypothesis, Chamberlin, 184.
 Polar climate in time the major factor in the evolution of plants and animals, Wieland, 1314.
 Report of advisory committee on geophysics, Woodward, 1350.
 Surface geology of New Brunswick, Stead, 1172.

Economic geology.*Alabama.*

- Clays of the United States, Ries, 1024.
 Geology of the Coosa Valley, 1225.
 Marble formations of Cahaba River, Byrne, 149.
 Materials and manufacture of Portland cement, Eckel, 345.
 Portland cement materials of Alabama, Smith, 1126.
 Soil survey of Perry County, Burke, 145.

Alaska.

- Chistochina gold field, Mendenhall, 876.
 Chitina copper deposits, Mendenhall, 879.
 Coal-bearing series of the Yukon, Collier, 233.
 Coal fields of Cook Inlet, Alaska, and Pacific coast, Kirsopp, 693.
 Coal resources of the Yukon, Collier, 229, 231.
 Copper deposits of the Mount Wrangell region, Mendenhall and Schrader, 881.
 Geology of copper deposits, Stevens, 1179.
 Glenn Creek gold mining district, Collier, 230.
 Gold mining in Arctic America, Penrose, 969.
 Gold mining in Klondike, Miers, 899.
 Gold production of North America, Lindgren, 802.
 Gold production of North America, Spurr, 1162.
 Kayak coal and oil fields, Stoess, 1188.

Economic geology—Continued.*Alaska*—Continued.

- Mineral resources of southeastern Alaska, Brewer, 127.
- Mineral resources of Mount Wrangell district, Mendenhall and Schrader, 880.
- Mining at the Alaska Treadwell, Kinzie, 691.
- Placer gold mining in Alaska in 1902, Brooks, 132.
- Stream tin in Alaska, Brooks, 133.
- Tin in Alaska, Bell, 68.
- Tin deposits of York region, Rickard, 1016.
- Tin in the York region, Collier, 232.
- Tin ledges in Alaska, Bell, 67.
- Treadwell group of mines, Kinzie, 690.

Arizona.

- Cement investigations in Arizona, Duryee, 333.
- Copper deposits of Bisbee, Ransome, 992, 993.
- Copper deposits at Clifton, Lindgren, 798, 801.
- Copper deposits of the Kaibab Plateau, Jennings, 639.
- Diatom-earth in Arizona, Blake, 84.
- Geology and copper deposits of Bisbee, Ransome, 994.
- Geology of Fort Apache region, Reagan, 1005.
- Geology of Globe copper district, Ransome, 991.
- Gold production of North America, Lindgren, 802.
- Recent discoveries in Arizona, Burgess, 140.
- Secondary enrichment, Probert, 981.
- Soil survey in Salt River Valley, Means, 871.
- Soil survey of the Yuma area, Holmes, 598.
- Tombstone and its mines, Blake, 86, 87.
- Tombstone mining district, Church, 185.
- Underground waters of Arizona, Skinner, 1119.
- Verde mining district, Miller, 903.

Arkansas.

- Arkansas-Indian Territory coal field, Bache, 47.
- Asphalt deposits of Pike County, Hayes, 527.
- Report of superintendent of Hot Springs Reservation, Eisele, 356.
- Soil survey of the Stuttgart area, Lapham, 768.
- Zinc and lead deposits of Arkansas, Adams, 8.
- Zinc and lead deposits of northern Arkansas, Adams, 7.

California.

- Borax deposits of eastern California, Campbell, 168.
- Composition and occurrence of petroleum, Mabery, 823.
- Contact-metamorphic deposits in the Sierra Nevada Mountains, Turner, 1217.
- Copper deposits of Redding region, Diller, 303.
- Cretaceous auriferous conglomerate of Siskiyou County, Turner, 1216.
- Dredging in Oroville, Knox, 701.
- Geology of district west of Redding, O'Brien, 936.
- Geology of Nevada and adjacent portions of California, Spurr, 1155.
- Gold production of North America, Lindgren, 802.
- Industrie du pétrole en Californie, Heurteau, 560.
- Iron ores of the Redding quadrangle, Diller, 304.

Economic geology—Continued.*California*—Continued.

- Limestone of the Redding district, Diller, 305.
- Mother lode gold deposits, Priehard, 980.
- Mother lode gold deposits, Turner, 1218.
- Neocene rivers of the Sierra Nevada, Lindgren, 796.
- Petroleum fields of California, Eldridge, 359.
- Soil survey around Fresno, Means and Holmes, 873.
- Soil survey around Imperial, Means and Holmes, 874.
- Soil survey around Santa Ana, Holmes, 595.
- Soil survey of the Hanford area, Lapham and Heileman, 772.
- Soil survey of the lower Salinas Valley, Lapham and Heileman, 773.
- Soil survey of the San Gabriel area, Holmes, 596.
- Soil survey of the Ventura area, Holmes and Mesmer, 599.
- Structural features of California gold belt, Storms, 1190.

Canada.

- Albert shale deposits, Ells, 365.
- Artesian borings, surface deposits, and ancient beaches in Ontario, Chalmers, 180.
- Artesian well in the Klondike, Tyrrell, 1219.
- Asbest in Canada, Cirkel, 187.
- Blairmore-Frank coal fields, Leach, 779.
- Boundary Creek district, Brock, 131.
- Canadian graphite, Brumell, 135.
- Coal fields of Cook Inlet, Alaska, and Pacific coast, Kirsopp, 693.
- Cobalt-nickel arsenides and silver in Ontario, Miller, 906.
- Composition and occurrence of petroleum, Mabery, 823.
- Copper-bearing rocks of Quebec, Dresser, 325.
- Eastern Assiniboia and southern Manitoba, Dowling, 319.
- Fossiliferous rocks of southwest Ontario, Parks, 958.
- Geological exploration in district of White Bay, Howley, 620.
- Geology of Bruce Mines district, Ingall, 629.
- Geology of Vancouver Island, Haycock, 521.
- Geology of Vancouver Island, Webster, 1273.
- Gold mining in Arctic America, Penrose, 969.
- Gold mining in Klondike, Miers, 899.
- Gold ores of western Ontario, Brent, 124.
- Gold production of North America, Lindgren, 802.
- Gold production of North America, Miller, 908.
- Iron bearing rocks in Ontario, Coleman, 226.
- Iron ranges of northern Ontario, Miller, 907.
- Michipicoten gold belt, Clarke, 191.
- Molybdenite, Wells, 1292.
- Moose Mountain iron range, Leith, 788.
- Mount Sicker mining district, Brewer, 128.
- Nova Scotia gold fields, Faribault, 387.
- Oil fields of Gaspe, Ells, 364.
- Ore deposits of Rossland, MacDonald, 831.
- Ore deposits of Sudbury, Dickson, 297.
- Ore quarrying in the Boundary district, British Columbia, Jacobs, 632.
- Sudbury mining district, Barlow, 58.
- Sudbury nickel deposits, Coleman, 225.

Economic geology—Continued.*Canada—Continued.*

Surveys and explorations in Nova Scotia, Fletcher, 403.

Turtle Mountain, Manitoba, Dowling, 320.

White Horse district, Brewer, 126.

Colorado.

Across the San Juan Mountains, Rickard, 1017.

Aguilar coal and oil district, Lakes, 728.

Barela Mesa coal field, McLaughlin, 835.

Basaltic zones as guides to ore deposition, Stevens, 1181.

Boulder oil field, Fenneman, 392.

Camp Bird gold mine, Titcomb, 1204.

Camp Bird mine, Ouray, Purington, 986.

Coal and asphalt deposits along Moffat railway, Lakes, 749.

Coal and mineral resources of Routt County, Parsons and Liddell, 959.

Colorado Central lode, Foster, 416.

Colorado: Report of State bureau of mines, Lee, 783.

Copper deposits at Pearl, Spencer, 1150.

Creede mining camp, Lakes, 739.

Genesis of ore deposits in Boulder County, Bagge, 48.

Geological structure of Camp Bird vein, Purington, 988.

Geology of the oil fields of Colorado, Lakes, 750.

Geology of Virginus mine, Purington, 990.

Gold production of North America, Austin, 46.

Gold production of North America, Lindgren, 802.

Lodes of Cripple Creek, Rickard, 1018, 1022.

Mineralogical mistake, Van Diest, 1235.

Mines and ore deposits of the Rosita and Silver Cliff mining district, Lakes, 742.

Mines of Ouray County, Downer and De Cou, 322.

Oil situation in Colorado, Lakes, 737.

Ore deposits of the American-Nettie mine, Ouray, Downer, 321.

Ore occurrence at Leadville, Robbins, 1032.

Redcliff ore deposits, Lakes, 733.

Reconnaissance in the Cache a la Poudre Valley, Means, 870.

Secondary enrichment at Cripple Creek, Weed, 1282.

Silver Lake mine, Lakes, 736.

Soil survey of the lower Arkansas Valley, Lapham, 771.

Soils of Colorado, Lakes, 729.

Summit County placers, Lakes, 732.

Tellurium veins in La Plata Mountains, Austin, 42.

Veins of Boulder and Kalgoorlie, Rickard, 1021.

Veins of Boulder County, Bagge, 49.

Connecticut.

Clays of the United States, Ries, 1024.

Soil survey in the Connecticut Valley, Dorsey and Bonsteel, 310.

Tungsten mining at Trumbull, Hobbs, 582.

Delaware.

Clays of the United States, Ries, 1024.

District of Columbia.

Clays of the United States, Ries, 1024.

Economic geology—Continued.*Florida.*

Clays of the United States, Ries, 1024.

Fuller's earth deposits of Florida and Georgia, Vaughan, 1245.

Georgia.

Clays of the United States, Ries, 1024.

Dahlonega gold district, Eckel, 347.

Dahlonega mining district, Eckel, 353.

Fuller's earth deposits of Florida and Georgia, Vaughan, 1245.

Gold and pyrite deposits of the Dahlonega district, Eckel, 348.

Gold mining in McDuffie County, Georgia, Fluker, 406.

Iron ores of Cartersville district, Hayes and Eckel, 529.

Ocher deposits in Cartersville district, Hayes and Eckel, 530.

Ocher deposits of Bartow County, Watson, 1271.

Manganese ore deposits of Georgia, Catlett, 179.

Manganese ore deposits of Georgia, Watson, 1272.

Manganese ores of the Cartersville district, Hayes, 521.

Soil survey of Cobb County, Burke and Marean, 143.

Soil survey of the Covington area, Marean, 841.

Vein structure at Reynolds mine, Collins, 234.

Hawaiian Islands.

Geology of Hawaiian Islands, Branner, 119.

Idaho.

Artesian basins in Idaho and Oregon, Russell, 1049.

Bellevue mining district, Lakes, 734.

Gold production of North America, Lindgren, 802.

Mining and milling in the Cœur d'Alene, Finlay, 399.

Mining industry of Cœur d'Alenes, Finlay, 398.

Silver City folio, Lindgren and Drake, 806.

Soil survey of the Boise area, Jensen and Olshausen, 641.

Soil survey of the Lewiston area, Mesmer, 893.

Thunder Mountain district, L'Hame, 794.

Illinois.

Clays of the United States, Ries, 1024.

Coal field of Indiana and Illinois, Fuller and Ashley, 425.

Fluorspar and zinc mines of Kentucky, Harwood, 506.

Soil survey of Clay County, Coffey, 218.

Soil survey of Clinton County, Bonsteel, 109.

Soil survey of St. Clair County, Coffey, 217.

Soil survey of Tazewell County, Bonsteel, 108.

Stone industry in vicinity of Chicago, Alden, 13.

Indiana.

Asphalt, oil, and gas in southwestern Indiana, Fuller, 420.

Clays of the United States, Ries, 1024.

Coal field of Indiana and Illinois, Fuller and Ashley, 425.

Economic geology—Continued.*Indiana—Continued.*

- Lower Carboniferous area of southern Indiana, Ashley, 40.
- Medicinal properties and uses of Indiana mineral waters, Hessler, 558.
- Mineral waters of Indiana, Blatchley, 90.
- Petroleum industry in Indiana, Blatchley, 91.
- Report of natural gas supervisor, Leach, 777, 778.
- Soil survey of Posey County, Marean, 843.

Indian Territory.

- Arkansas-Indian Territory coal field, Bache, 47.
- Asphalt refining, Crane, 243.
- Coal mining in Indian Territory, Crane, 245.
- Tishomingo folio, Taff, 1192.

Iowa.

- Artesian wells in Iowa, Calvin, 157.
- Geology of Chickasaw County, Calvin, 159.
- Geology of Howard County, Iowa, Calvin, 158.
- Geology of Mills and Fremont counties, Udden, 1220.
- Geology of Mitchell County, Calvin, 160.
- Geology of Monroe County, Iowa, Beyer and Young, 78.
- Geology of Tama County, Savage, 1071.
- Gypsum of central Iowa, Wilder, 1316.
- Soil survey of the Dubuque area, Fippin, 400.
- Tests of lithographic limestone of Mitchell County, Hoen, 589.

Kansas.

- Coal fields of Kansas, Crane, 244.
- Economic geology of Iola and vicinity, Grimsley, 488.
- Gold in Kansas, Lovewell, 813.
- Gold in Kansas shales, Lovewell, 812.
- Lead and zinc deposits of the Joplin district, Smith, 1139.
- Origin of gypsum deposits, Sherwin, 1104.
- Ottawa gas wells, Yates, 1364.
- Soil survey of the Wichita area, Lapham and Olshausen, 770.

Kentucky.

- Asphalt rock in Kentucky, Burk, 141.
- Barboursville oil field, McCallie, 828.
- Clays of the United States, Ries, 1021.
- Fluorspar and zinc mines of Kentucky, Harwood, 506.
- Lead, zinc, and fluorspar deposits of western Kentucky, Ulrich and Smith, 1223.
- Report on lands leased for oil and gas near Cannel City, Lane, 760.
- Soil survey of Union County, Marean, 842.

Louisiana.

- Oil fields of Texas-Louisiana Gulf coastal plain, Hayes, 526.
- Oil fields of Texas-Louisiana Gulf coastal plain, Hayes and Kennedy, 532.
- Soil survey of the Lake Charles area, Heileman and Mesmer, 541.

Maine.

- Clays of the United States, Ries, 1024.

Maryland.

- Clays of the United States, Ries, 1024.
- Copper deposits of Appalachian States, Weed, 1278.

Economic geology—Continued.*Maryland—Continued.*

- Soil survey of Calvert County, Bonsteel and Burke, 103.
- Soil survey of Cecil County, Dorsey and Bonsteel, 313.
- Soil survey of Harford County, Smith and Martin, 1143.
- Soil survey of Kent County, Bonsteel, 104.
- Soil survey of Prince George County, Bonsteel, 106.
- Soil survey of St. Mary County, Bonsteel, 102.

Massachusetts.

- Clays of the United States, Ries, 1024.
- Soil survey in the Connecticut Valley, Dorsey and Bonsteel, 310.

Mexico.

- Cananea ore deposits, Weed, 1284.
- Cananea revisited, Hill, 571.
- Coal mines at Las Esperanzas, Ries, 1027.
- Cobalt au Mexique, Caballero, 150.
- Genesis de los yacimientos mercuriales de Palomas, Villarello, 1249.
- Geology of San Pedro district, Finlay, 394.
- Geology of the Cananeas, Mathez, 853.
- Gold production of North America, Lindgren, 802.
- Mines of Santa Eulalia, Aiken, 12.
- Occurrence of selenium with pyrite, Pearce, 962.
- Ore deposits of Cananea, Austin, 44.
- Ore deposits of Cananea, Hill, 570.
- Ore deposits of La Cananea, Steel, 1173.
- Sain Alto tin deposits, Nevius, 928.
- Santa Eulalia district, Hill, 569.
- Santa Eulalia mines, Lakes, 743.
- Santa Eulalia mining district, Argall, 36.
- Santa Eulalia ore deposits, Argall, 37.
- Silver-bearing veins of Mexico, Halse, 497.
- Trip to Chihuahua, Lakes, 740.
- Yaqui River country of Sonora, Baneroff, 55.

Michigan.

- Clays of the United States, Ries, 1024.
- Copper mining in Upper Michigan, Jackson, 631.
- Economic geology of Michigan, Lane, 763.
- Localities and mills manufacturing Portland cement, Lane, 757.
- Marl and the manufacture of Portland cement, Hale, 492.
- Marls and clays in Michigan, Fall, 386.
- Origin of Michigan boglimes, Lane, 756.
- Report of Michigan Geological Survey, Lane, 754.
- Soil survey of Allegan County, Fippin and Rice, 402.

Minnesota.

- Geologic work in Lake Superior iron district, Leith, 787.
- Geology of Minnesota, Hall, 495.
- Iron ores of Mesabi and Gogebie ranges, Leith, 790.
- Mesabi iron range, Winchell, 1340.
- Mesabi iron-bearing district, Leith, 786.
- Vermilion iron-bearing district of Minnesota, Clements, 209.

Economic geology—Continued.*Mississippi.*

- Clays of the United States, Ries, 1024.
- Soil survey of the Smedes area, Smith and Carter, 1146.
- Soil survey of the Yazoo area, Bonsteel, 107.
- Stoneware and brick clays, Eckel, 350.

Missouri.

- Bituminous and asphalt rocks, Broadhead, 130.
- Joplin zinc district, Steele, 1174.
- Lead and zinc deposits of the Joplin district, Smith, 1139.
- Soil survey of Howell County, Fippin and Burgess, 401.

Montana.

- Chalcocite at Butte, Winchell, 1339.
- Igneous rocks and their segregation, Winchell, 1338.
- Gold mines of Marysville district, Weed, 1275.
- Gold nugget from Montana, Pearce, 962.
- Gold production of North America, Lindgren, 802.
- Mineral deposits of Bitterroot Range and Clearwater Mountains, Lindgren, 797.
- Montana coal fields, Rowe, 1039.
- Ore deposits at Butte, Weed, 1277.
- Soil survey of the Billings area, Jensen and Neill, 642.
- Volcanic ash beds of Montana, Rowe, 1038.

Nebraska.

- Jefferson County, Carmony, 171.
- Report of State geologist, Barbour, 56.
- Scotts Bluff folio, Darton, 272.

Nevada.

- Contact quaquaversal, Purington, 985.
- Geology of Nevada, Spurr, 1155.
- Gold production of North America, Lindgren, 802.
- Gypsum deposits of Nevada, Louderbach, 810.
- Hydrothermal activity in veins at Wedekind, Morris, 918.
- Ore deposits of Contact, Bailey, 51.
- Ore deposits of Tonopah, Spurr, 1157, 1158, 1160.
- Tungsten ore in eastern Nevada, Weeks, 1287.

New Jersey.

- Artesian wells, Woolman, 1354.
- Clays of the United States, Ries, 1024.
- Copper deposits of Appalachian States, Weed, 1278.
- Copper deposits of New Jersey, Weed, 1279.
- Iron and zinc mines, Kummel, 705.
- Soil survey of the Salem area, Bonsteel and Taylor, 105.
- Soil survey of the Trenton area, Burke and Wilder, 144.
- Zinc and manganese deposits of Franklin Furnace, Wolff, 1348.

New Mexico.

- Copper deposits of Sierra Oscura, Turner, 1215.
- Geology of Apache Canyon placers, Keyes, 684.
- Geology of the Cerrillos Hills, Johnson, 646.
- Geology of the Jemez-Albuquerque region, Reagan, 1003.

Economic geology—Continued.*New Mexico—Continued.*

- Gold production of North America, Lindgren, 802.
- Jemez coal fields, Reagan, 1006.
- New Mexico copper deposits, Austin, 43.
- Ore deposits of San Pedro district, Yung and McCaffery, 1367.
- Remarkable silver pipe, Keyes, 683.
- Soil survey in the Pecos Valley, Means and Gardner, 872.

New York.

- Clays of the United States, Ries, 1024.
- Limestones in central New York, Schneider, 1078.
- Magnetite deposits at Mineville, Ries, 1011.
- Peat and its occurrence in New York, Ries, 1025.
- Portland-cement industry in New York, Eckel, 342.
- Quarries of bluestone, Dickinson, 296.
- Rossie lead veins, Smyth, 1147.
- Soil survey of the Bigflats area, Mesmer and Hearn, 894.
- Soil survey of the Lyons area, Hearn, 537.
- Soil survey of the Westfield area, Burke and Marean, 142.
- Whetstone industry, Schneider, 1080.

Nicaragua.

- Gold fields of eastern Nicaragua, Gottschalk, 463.

North Carolina.

- Clays of the United States, Ries, 1024.
- Cranberry folio, Keith, 659.
- Copper-bearing rocks of Virgilina copper district, Watson, 1270.
- Copper deposits of Appalachian States, Weed, 1278.
- Iron-ore deposits of the Cranberry district, Keith, 660.
- Soil survey from Raleigh to Newbern, Smith, 1141.
- Soil survey of Alamance County, Coffey and Hearn, 215.
- Soil survey of Cary area, Coffey and Hearn, 216.
- Soil survey of the Hickory area, Caine, 151.
- Soil survey of the Mount Mitchell area, Caine and Mangum, 152.
- Soil survey of the Statesville area, Dorsey, 314.
- Tale deposits of North Carolina, Keith, 662.

North Dakota.

- Soil survey of the Grand Forks area, Jensen and Neill, 643.

Ohio.

- Clays of the United States, Ries, 1024.
- Composition and occurrence of petroleum, Mabery, 823.
- Eastern Ohio oil fields, Griswold, 489.
- Ohio natural gas fields, Bownocker, 117.
- Petroleum and natural gas in Ohio, Bownocker, 117a.
- Origin of gypsum deposits, Sherwin, 1104.
- Soil survey of Montgomery County, Dorsey and Coffey, 312.
- Soil survey of the Columbus area, Smith, 1145.
- Soil survey of the Toledo area, Smith, 1144.

Economic geology—Continued.*Oregon.*

- Artesian basins in Idaho and Oregon, Russell, 1049.
- Gold production of North America, Lindgren, 802.
- Port Orford folio, Diller, 301.
- Quicksilver deposits of Oregon, Dennis, 295.

Panama.

- Manganese industry of Panama, Williams, 1319.

Pennsylvania.

- Anthracite situation, Kemp, 663.
- Brownsville-Connellsville folio, Campbell, 164.
- Charbons gras de la Pennsylvanie et de la Virginie occidentale, Heurteau, 559.
- Clays of the United States, Ries, 1024.
- Coal Measures of bituminous regions, Adams, 11.
- Elkland-Tioga folio, Fuller and Alden, 424.
- Gaines folio, Fuller and Alden, 423.
- Recent work in the bituminous coal field of Pennsylvania, Campbell, 167.
- Slate industry at Slatington, Dale, 260.
- Soil survey around Lancaster, Dorsey, 311.
- Soil survey of the Lebanon area, Smith and Bennett, 1142.

Philippine Islands.

- Geological reconnaissance of Bulacan, McCaskey, 829.

Porto Rico.

- Soil survey from Arceibo to Ponce, Dorsey, Mesmer, and Caine, 315.

Rhode Island.

- Clays of the United States, Ries, 1024.

South Carolina.

- Clays of the United States, Ries, 1024.
- Soil survey of the Abbeville area, Taylor and Rice, 1198.
- Soil survey of the Darlington area, Rice and Taylor, 1012.

South Dakota.

- Age of Homestake lode, Hewett, 562.
- Alexandria folio, Todd and Hall, 1211.
- Building stones of South Dakota, Todd, 1206.
- Gold production of North America, Lindgren, 802.
- Mitchell folio, Todd, 1210.
- Olivet folio, Todd, 1208.
- Ore deposits of northern Black Hills, Irving, 630.
- Parker folio, Todd, 1209.
- Potsdam formation of Bald Mountain district, Blatchford, 89.

Tennessee.

- Clays of the United States, Ries, 1024.
- Columbia folio, Hayes and Ulrich, 533.
- Copper deposits of Appalachian States, Weed, 1278.
- Cranberry folio, Keith, 659.
- Iron-ore deposits of the Cranberry district, Keith, 660.
- Soil survey of Montgomery County, Lapham and Miller, 769.
- Stoneware and brick clays, Eckel, 350.
- Tennessee marbles, Keith, 661.

Economic geology—Continued.*Tennessee—Continued.*

- Tennessee white phosphates, Hayes, 528.
- White phosphates of Decatur County, Eckel, 352.

Texas.

- Beaumont oil field, Hill, 568.
- Composition and occurrence of petroleum, Mabery, 823.
- Geology of Beaumont oil field, Dumble, 330.
- Industrie du pétrole en Californie, Heurteau, 560.
- Iron ores of east Texas, Dumble, 331.
- Mount Pleasant phosphate field, Ruhm, 1047.
- Oil fields of Texas-Louisiana Gulf coastal plain, Hayes, 526.
- Oil fields of Texas-Louisiana Gulf coastal plain, Hayes and Kennedy, 532.
- Physical geography, geology, and resources of Texas, Dumble, 329.
- Soil survey of the Brazoria area, Bennett and Jones, 69.
- Soil survey of the Vernon area, Lapham, 767.
- Soil survey of the Willis area, Martin, 847.
- Tin deposits at El Paso, Weed, 1276.

Utah.

- Coal mining at Sunnyside, Harrington, 503.
- Copper deposits of Beaver River Range, Crowther, 252.
- Gold production of North America, Lindgren, 802.
- Mineral crest, Emmons, 376.
- Mineral crest, Jenney, 636.
- Mineral crest, Smith, 1135.
- Ore deposits of Bingham, Boutwell, 116.
- Park City mining district, Boutwell, 115.
- Reconnaissance in Sanpete, Cache, and Utah counties, Means, 869.
- Soil survey in Salt Lake Valley, Gardner and Stewart, 432.
- Soil survey in the Sevier Valley, Gardner and Jensen, 431.
- Soil survey in Weber County, Gardner and Jensen, 433.
- Southwestern Utah and its iron ores, Hewett, 561.

Vermont.

- Asbestos region in northern Vermont, Kemp, 670.

Virginia.

- Clays of the United States, Ries, 1024.
- Copper-bearing rocks of Virginiana copper district, Watson, 1270.
- Copper deposits of Appalachian States, Weed, 1278.
- Origin of Oriskany limonites, Johnson, 651.
- Salt and gypsum deposits of southwestern Virginia, Eckel, 351.
- Soil survey of the Albemarle area, Mooney and Bonsteel, 917.
- Soil survey of the Bedford area, Mooney, Martin, and Caine, 915.
- Soil survey of the Prince Edward area, Mooney and Caine, 916.

Washington.

- Building and ornamental stones of Washington, Shedd, 1100.

Economic geology—Continued.*Washington*—Continued.

- Coal deposits of Washington, Landes and Ruddy, 753.
- Coal fields of Cook Inlet, Alaska, and Pacific coast, Kirsopp, 693.
- Ellensburg folio, Smith, 1131.
- Gold mining in central Washington, Smith, 1133.
- Gold production of North America, Lindgren, 802.
- Soil survey of the Yakima area, Jensen and Olshausen, 640.
- Soil survey of the Walla Walla area, Holmes, 597.
- Soils of the wheat lands of Washington, Calkins, 156.

West Indies.

- Copper mines of Cobre, Santiago de Cuba, Moffet, 912.
- Manganese deposits of Santiago, Spencer, 1151.

West Virginia.

- Anthracite coal field west of Washington, White, 1298.
- Anthracite of Third Hill Mountain, O'Brien, 935.
- Appalachian coal field, White, 1301.
- Charbons gras de la Pennsylvanie et de la Virginie occidentale, Heurteau, 559.
- Clays of the United States, Ries, 1024.
- Properties of Summit Coal Company in Marshall County, Von Rosenberg, 1250.
- Slate industry at Martinsburg, Dale, 260.

Wisconsin.

- Baraboo iron range, Rohn, 1036.
- Clays of the United States, Ries, 1024.
- Highway construction in Wisconsin, Buckley, 136.
- Lead and zinc deposits of southwestern Wisconsin, Grant, 475.
- Soil survey of the Janesville area, Bonsteel, 110.
- Wisconsin zinc fields, Nicholson, 931.

Wyoming.

- Bonanza, Cottonwood, and Douglas oil fields, Knight and Slosson, 697.
- Coal fields of Uinta County, Knight, 695.
- Gold production of North America, Lindgren, 802.
- Hartville folio, Smith, 1138.
- Laramie cement plaster, Slosson and Moudy, 1120.
- Mineral resources of Encampment copper region, Spencer, 1149.
- Platinum in the Rambler mine, Kemp, 666.
- Platinum in copper ores in Wyoming, Emmons, 375.
- South Pass gold district, Fremont County, Beeler, 65.

General.

- Anthracite situation, Kemp, 663.
- Application of geology to mining, Spurr, 1163.
- Asphalt and bituminous rock deposits in the United States, Eldridge, 358.
- Aurite, and a general theory of gold ore genesis, Voyle, 1251.
- Bonanzas and pockets of ore, Lakes, 748.

Economic geology—Continued.*General*—Continued.

- Chemistry of ore deposition, Church, 186.
- Chemistry of ore deposition, Jenney, 637.
- Classification of ore deposits, Lindgren, 803.
- Classification of ore deposits, Weed, 1285.
- Clays of the United States, Ries, 1024.
- Coal fields of the United States, Hayes, 525.
- Composition and occurrence of petroleum, Mabery, 823.
- Contributions to economic geology, Emmons, Hayes, 373.
- Contributions to economic geology, Hayes, 522.
- Cross-vein ore-shoots and fractures, Weed, 1283.
- Deposition of ores in limestone, Jenney, 638.
- Deposition of ores from an igneous magma, Stevenson, 1185.
- Differentiation of igneous magmas and the formation of ores, Kemp, 668.
- Diffusion of petroleum through fuller's earth, Day, 290.
- Genesis of ore deposits, Boehmer, 94.
- Genetic classification of ore deposits, Emmons, 378.
- Genetic classification of ore deposits, Kemp, 675.
- Genetic classification of ore deposits, Ransome, 995.
- Genetic classification of ore deposits, Rickard, 1023.
- Genetic classification of ore deposits, Spurr, 1164.
- Genetic classification of ore deposits, Van Hise, 1238.
- Geologic deposition of hydrocarbons, Adams, 5.
- Geologic deposition of hydrocarbons, Day, 291.
- Geological work in Lake Superior region, Van Hise, 1236.
- Geology of Idaho and Oregon, Russell, 1048.
- Gold production of North America, Lindgren, 800.
- Igneous rocks and circulating waters as factors in ore deposition, Kemp, 665.
- Igneous rocks and their segregation, Spurr, 1161.
- Investigation of nonmetalliferous economic minerals, Hayes, 523.
- Investigation of metalliferous ores, Emmons, 374.
- Literature of structural materials, Eckel, 343.
- Literature on petroleum, Teggart, 1201.
- Metallic sulphides from Steamboat Springs, Nevada, Lindgren, 805.
- Methods of testing and sampling placer deposits, Kirby, 692.
- Mineral crest, Emmons, 376.
- Mineral crest, Smith, 1135.
- Molding sand, Eckel, 346.
- Natural history of marl, Davis, 275.
- Observations on gold deposits, Purington, 989.
- Oil wells of the United States, Kilham, 688.
- Ore deposition and vein enrichment, Weed, 1281.

Economic geology—Continued.*General—Continued.*

- Ore deposits near igneous contacts, Austin, 45.
- Ore deposits near igneous contacts, Weed, 1281.
- Origin and development of iron ores of Mesabi and Gogebie iron ranges, Leith, 790.
- Origin of Michigan boglimes, Lane, 756.
- Origin of petroleum, Grant, 474.
- Osmosis as a factor in ore formation, Gillette, 450.
- Review of analyses of Portland cement materials, Hillebrand, 573.
- Rock segregation and ore deposition, Spurr, 1159.
- Rock segregation and ore deposition, Stevens, 1180.
- Secondary enrichment, Burgess, 139.
- Secondary enrichment in arid regions, Starbird, 1171.
- Secondary enrichment of mineral veins, Herrick, 552.
- Secondary enrichment of ore deposits, Lakes, 735.
- Secondary enrichment, Purington, 987.
- Secondary enrichment of ore deposits, Smith, 1129.
- Stones for building and decoration, Merrill, 892.
- Summaries of literature of economic geology, Eckel, 344.
- Syncline as a structural type, Rickard, 1020.
- Trenton rock petroleum, Blatchley and Sheak, 93.
- Utilization of iron and steel slags, Eckel, 349.
- Volcanic origin of natural gas and petroleum, Coste, 241.
- Water in veins, Rickard, 1019.
- Zinc deposits, Lakes, 741.

Economic products described.

- Artesian water, Barbour, 56.
- Artesian water, Blatchley, 90.
- Artesian water, Branner, 119.
- Artesian water, Calvin, 157.
- Artesian water, Carmony, 171.
- Artesian water, Darton, 272.
- Artesian water, Reagan, 1005.
- Artesian water, Russell, 1048, 1049.
- Artesian water, Skinner, 1119.
- Artesian water, Todd, 1208, 1209, 1210.
- Artesian water, Todd and Hall, 1211.
- Artesian water, Tyrell, 1219.
- Artesian water, Woolman, 1354.
- Asbestos, Cirkel, 187.
- Asphalt, Adams, 5.
- Asphalt, Crane, 244.
- Asphalt, Eldridge, 358.
- Asphalt, Hayes, 527.
- Asphalt, Lakes, 749.
- Asphalt rock, Burk, 141.
- Asphaltic deposits, Taff, 1192.
- Basalt, Shedd, 1100.
- Bituminous rock, Eldridge, 358.
- Bluestone, Dickinson, 296.
- Boglime, Lane, 756.
- Borax, Campbell, 168.
- Building stone, Alden, 13.

Economic products described—Continued.

- Building stone, Ashley, 40.
- Building stone, Barbour, 56.
- Building stone, Campbell, 164.
- Building stone, Fuller and Alden, 423.
- Building stone, Merrill, 892.
- Building stone, Shedd, 1100.
- Building stone, Smith, 1131.
- Building stone, Taff, 1192.
- Building stone, Todd, 1206, 1209, 1210.
- Building stone, Todd and Hall, 1211.
- Building and ornamental stones, Keith, 659.
- Cement, Duryee, 333.
- Cement, Eckel, 345.
- Cement, Smith, 1126.
- Cement plaster, Slosson and Moudy, 1120.
- Chalkstone, Todd, 1208.
- Chromium, Spurr, 1161.
- Clays, Ashley, 40.
- Clays, Barbour, 56.
- Clay, Beyer and Young, 78.
- Clay, Campbell, 164.
- Clay, Eckel, 350.
- Clay, Fall, 386.
- Clay, Lane, 757.
- Clay, Ries, 1024.
- Clay, Todd, 1210.
- Coal, Adams, 11.
- Coal, Bache, 47.
- Coal, Barbour, 56.
- Coal, Beyer and Young, 78.
- Coal, Brewer, 126.
- Coal, Campbell, 164, 167.
- Coal, Collier, 229, 231, 233.
- Coal, Crane, 244, 245.
- Coal, Diller, 301.
- Coal, Fuller and Alden, 423.
- Coal, Fuller and Ashley, 425.
- Coal, Griffith, 486.
- Coal, Harrington, 503.
- Coal, Hayes, 525.
- Coal, Heurteau, 559.
- Coal, Johnson, 646.
- Coal, Kemp, 663.
- Coal, Knight, 695.
- Coal, Lakes, 728, 749.
- Coal, Landes and Ruddy, 753.
- Coal, McLaughlin, 835.
- Coal, Parsons and Liddell, 959.
- Coal, Reagan, 1006.
- Coal, Ries, 1027.
- Coal, Rowe, 1039.
- Coal, Stoess, 1188.
- Coal, Von Rosenberg, 1250.
- Coal, White, 1298, 1301.
- Cobalt, Caballero, 150.
- Cobalt, Dickson, 297.
- Cobalt, Miller, 906.
- Cobalt, Spurr, 1161.
- Copper, Austin, 44.
- Copper, Barlow, 58.
- Copper, Brewer, 126, 128.
- Copper, Brook, 131.
- Copper, Boutwell, 116.
- Copper, Crowther, 252.
- Copper, Dresser, 325.
- Copper, Diller, 303.

Economic products described—Continued.

Copper, Hill, 570, 571.
 Copper, Jackson, 631.
 Copper, Jacobs, 632.
 Copper, Jennings, 639.
 Copper, Lee, 783.
 Copper, Lindgren, 738, 801.
 Copper, MacDonald, 831.
 Copper, Mathez, 853.
 Copper, Mendenhall, 879.
 Copper, Mendenhall and Schrader, 880, 881.
 Copper, Miller, 903.
 Copper, Probert, 981.
 Copper, Ransome, 991, 992, 993, 994.
 Copper, Smith, 1138.
 Copper, Spencer, 1149, 1150.
 Copper, Spurr, 1161.
 Copper, Steel, 1173.
 Copper, Stevens, 1179.
 Copper, Turner, 1215.
 Copper, Weed, 1277, 1278, 1279, 1280, 1284.
 Copper, Winchell, 1339.
 Copper, Yung and McCaffery, 1367.
 Diatom-earth, Blake, 84.
 Flagstone, Fuller and Alden, 424.
 Flint, Barbour, 56.
 Fluorspar, Harwood, 506.
 Fluorspar, Ulrich and Smith, 1223.
 Fuller's earth, Vaughan, 1245.
 Glass sand, Campbell, 164.
 Gold, Austin, 46.
 Gold, Bancroft, 55.
 Gold, Blake, 86.
 Gold, Boutwell, 116.
 Gold, Brent, 124.
 Gold, Brooks, 132.
 Gold, Burgess, 140.
 Gold, Church, 185.
 Gold, Clarke, 191.
 Gold, Collier, 230.
 Gold, Diller, 301.
 Gold, Eckel, 347, 348.
 Gold, Faribault, 387.
 Gold, Fluker, 406.
 Gold, Gottschalk, 463.
 Gold, Hewett, 562.
 Gold, Howley, 620.
 Gold, Irving, 630.
 Gold, Keith, 659.
 Gold, Keyes, 681.
 Gold, Kinzie, 690, 691.
 Gold, Knox, 701.
 Gold, Lakes, 732, 733, 740.
 Gold, Lee, 783.
 Gold, L'Hame, 794.
 Gold, Lindgren, 798, 800, 802.
 Gold, Lindgren and Drake, 806.
 Gold, Lovewell, 812, 813.
 Gold, MacDonald, 831.
 Gold, Mendenhall and Schrader, 880.
 Gold, Miers, 899.
 Gold, Miller, 908.
 Gold, Parsons and Liddell, 959.
 Gold, Penrose, 969.
 Gold, Prichard, 980.
 Gold, Purington, 986, 988, 989, 990.
 Gold, Ransome, 991.

Economic products described—Continued.

Gold, Rickard, 1021, 1022.
 Gold, Smith, 1133.
 Gold, Spurr, 1158, 1160, 1161, 1162.
 Gold, Storms, 1190.
 Gold, Titcomb, 1204.
 Gold, Turner, 1216, 1218.
 Gold, Weed, 1275, 1280.
 Gold, Winchell, 1338.
 Gold, Yung and McCaffery, 1367.
 Granite, Shedd, 1100.
 Graphite, Brumell, 135.
 Gypsum, Eckel, 351.
 Gypsum, Louderbach, 810.
 Gypsum, Sherwin, 1104.
 Gypsum, Slosson and Moudy, 1120.
 Gypsum, Wilder, 1316.
 Hematite, Keith, 659.
 Iron, Clements, 209.
 Iron, Diller, 304.
 Iron, Dumble, 331.
 Iron, Hayes and Eckel, 529.
 Iron, Hayes and Ulrich, 533.
 Iron, Johnson, 651.
 Iron, Keith, 787.
 Iron, Kummel, 705.
 Iron, Leith, 786, 787, 788.
 Iron, McCaskey, 829.
 Iron, Miller, 907.
 Iron, Ries, 1026.
 Iron, Rohn, 1036.
 Iron, Smith, 1138.
 Iron, Spurr, 1161.
 Iron, Winchell, 1340.
 Lead, Adams, 7, 8.
 Lead, Aiken, 12.
 Lead, Argall, 37.
 Lead, Finlay, 398.
 Lead, Grant, 475.
 Lead, Lakes, 734, 736, 739, 743.
 Lead, Lee, 783.
 Lead, Nicholson, 931.
 Lead, Smith, 1139.
 Lead, Smyth, 1147.
 Lead, Ulrich and Smith, 1223.
 Lead, Yung and McCaffery, 1367.
 Limestone, Ashley, 40.
 Limestone, Campbell, 164.
 Limestone, Diller, 305.
 Limestone, Fuller and Alden, 424.
 Limestone, Shedd, 1100.
 Limestone, Smith, 1138.
 Limestone, Schneider, 1078.
 Limestone, bituminous, Taff, 1192.
 Limestone, lithographic, Hoen, 589.
 Magnetite, Keith, 659.
 Manganese, Blake, 87.
 Manganese, Catlett, 179.
 Manganese, Church, 185.
 Manganese, Hayes, 524.
 Manganese, Spencer, 1151.
 Manganese, Watson, 1272.
 Manganese, Williams, 1319.
 Manganese, Wolff, 1348.
 Marble, Byrne, 149.
 Marble, Keith, 661.
 Marble, Shedd, 1100.

Economic products described—Continued.

Marl, Davis, 275.
 Marl, Fall, 386.
 Marl, Lane, 757.
 Marl (bog lime), Hale, 492.
 Mercury, Villarello, 1249.
 Mica, Keith, 659.
 Mineral water, Blatchley, 90.
 Mineral water, Eisele, 356.
 Mineral water, Hessler, 558.
 Molybdenite, Wells, 1292.
 Natural gas, Adams, 5.
 Natural gas, Bownocker, 117a.
 Natural gas, Campbell, 164, 165.
 Natural gas, Coste, 241.
 Natural gas, Grimsley, 488.
 Natural gas, Leach, 777, 778.
 Natural gas, Yates, 1364.
 Nickel, Barlow, 58.
 Nickel, Coleman, 225.
 Nickel, Dickson, 297.
 Nickel, Miller, 906.
 Nickel, Spurr, 1161.
 Ocher, Watson, 1271.
 Ornamental stone, Shedd, 1100.
 Peat, Chalmers, 180.
 Peat, Ries, 1025.
 Petroleum, Adams, 5.
 Petroleum, Blatchley, 91.
 Petroleum, Blatchley and Sheak, 93.
 Petroleum, Bownocker, 117a.
 Petroleum, Campbell, 167.
 Petroleum, Coste, 241.
 Petroleum, Day, 290, 291.
 Petroleum, Dumble, 330.
 Petroleum, Eldridge, 359.
 Petroleum, Ellis, 364.
 Petroleum, Fenneman, 392.
 Petroleum, Fuller and Alden, 423.
 Petroleum, Hayes, 526.
 Petroleum, Hayes and Kennedy, 532.
 Petroleum, Griswold, 489.
 Petroleum, Hill, 568.
 Petroleum, Heurteaux, 559.
 Petroleum, Kilham, 688.
 Petroleum, Knight and Slosson, 697.
 Petroleum, Lakes, 728, 737, 750.
 Petroleum, McCallie, 828.
 Petroleum, Russell, 1048.
 Petroleum, Stoess, 1188.
 Phosphate, Eckel, 351.
 Phosphate, Hayes, 528.
 Phosphate, Hayes and Ulrich, 533.
 Phosphate rock, Ruhm, 1047.
 Platinum, Emmons, 375.
 Platinum, Kemp, 666.
 Platinum, Spurr, 1161.
 Platinum minerals, Diller, 301.
 Portland cement, Eckel, 342.
 Pyrite, Eckel, 348.
 Quicksilver, Dennis, 295.
 Road materials, Buckley, 136.
 Salt, Eckel, 351.
 Sand, Ashley, 40.
 Sand, Barbour, 56.
 Sand, molding, Eckel, 346.
 Sandstone, Ashley, 40.

Economic products described—Continued.

Sandstone, Dickinson, 296.
 Sandstone, Shedd, 1100.
 Sandstone, Smith, 1138.
 Sandstone, bituminous, Taff, 1192.
 Serpentine, Shedd, 1100.
 Silver, Aiken, 12.
 Silver, Argall, 37.
 Silver, Blake, 86.
 Silver, Church, 185.
 Silver, Finley, 398.
 Silver, Halse, 497.
 Silver, Hill, 569.
 Silver, Keyes, 683.
 Silver, Lakes, 734, 736, 739, 740, 743.
 Silver, Lee, 783.
 Silver, Lindgren and Drake, 806.
 Silver, Miller, 906.
 Silver, Purington, 986, 988.
 Silver, Ransome, 991.
 Silver, Spurr, 1158, 1160.
 Silver, Yung and McCaffery, 1367.
 Slate, Dale, 260.
 Soapstone, Keith, 659.
 Soils, Bennett and Jones, 69.
 Soils, Bonsteel, 102, 104, 106, 107, 108, 109, 110.
 Soils, Bonsteel and Burke, 103.
 Soils, Bonsteel and Taylor, 105.
 Soils, Burke, 145.
 Soils, Burke and Marcan, 142, 143.
 Soils, Burke and Wilder, 144.
 Soils, Caine, 151.
 Soils, Caine and Mangum, 152.
 Soils, Coffey, 217, 218.
 Soils, Coffey and Hearn, 215, 216.
 Soils, Dorsey, 311, 314.
 Soils, Dorsey and Bonsteel, 310, 313.
 Soils, Dorsey and Coffey, 312.
 Soils, Dorsey, Mesmer, and Caine, 315.
 Soils, Fippin, 400.
 Soils, Fippin and Burgess, 401.
 Soils, Fippin and Rice, 402.
 Soils, Gardner and Jensen, 433, 434.
 Soils, Gardner and Stewart, 432.
 Soils, Hayes and Ulrich, 533.
 Soils, Hearn, 537.
 Soils, Heileman and Mesmer, 541.
 Soils, Holmes, 595, 596, 597, 598.
 Soils, Holmes and Mesmer, 599.
 Soils, Jensen and Neill, 642, 643.
 Soils, Jensen and Olshausen, 640, 641.
 Soils, Lakes, 729.
 Soils, Lapham, 767, 768, 771.
 Soils, Lapham and Heileman, 772, 773.
 Soils, Lapham and Miller, 769.
 Soils, Lapham and Olshausen, 770.
 Soils, Marcan, 841, 842, 843.
 Soils, Martin, 847.
 Soils, Means, 869, 870, 871.
 Soils, Means and Gardner, 872.
 Soils, Means and Holmes, 873, 874.
 Soils, Mesmer, 893.
 Soils, Mesmer and Hearn, 894.
 Soils, Mooney and Bonsteel, 917.
 Soils, Mooney and Caine, 916.
 Soils, Mooney, Martin, and Caine, 915.
 Soils, Rice and Taylor, 1012.

Economic products described—Continued.

Soils, Smith, 1141, 1144, 1145.
 Soils, Smith and Bennett, 1142.
 Soils, Smith and Carter, 1146.
 Soils, Smith and Martin, 1143.
 Soils, Taff, 1192.
 Soils, Taylor and Rice, 1198.
 Soils, Todd, 1209, 1210.
 Tale, Keith, 662.
 Tin, Bell, 66, 68.
 Tin, Brooks, 133.
 Tin, Collier, 232.
 Tin, Nevius, 928.
 Tin, Rickard, 1016.
 Tin, Weed, 1276.
 Tufa, Shedd, 1100.
 Tuff, Shedd, 1100.
 Tungsten, Hobbs, 582.
 Tungsten, Weeks, 1287.
 Turquoise, Johnson, 646.
 Volcanic ash, Rowe, 1038.
 Water power, Ashley, 40.
 Whetstone, Schneider, 1080.
 Zinc, Adams, 7, 8.
 Zinc, Boutwell, 116.
 Zinc, Grant, 475.
 Zinc, Harwood, 506.
 Zinc, Lakes, 741.
 Zinc, Kummel, 705.
 Zinc, Nicholson, 931.
 Zinc, Smith, 1139.
 Zinc, Steele, 1174.
 Zinc, Ulrich and Smith, 1223.
 Zinc, Wolff, 1348.

Florida.

Clays of the United States, Ries, 1021.
 Fuller's earth deposits of Florida and Georgia, Vaughan, 1245.
 New Conus from Tertiary, Aldrich, 17.
 New species of Tertiary fossils, Aldrich, 16.
 Tertiary fauna of Florida, Dall, 261.

Geologic formations described.

Abrigo limestone, Cambrian, Arizona, Ransome, 994.
 Acadian, Cambrian, New York, Clarke, 201.
 Acadian division, Cambrian, Canada, Matthew, 858.
 Adams Lake series, Cambrian, Canada, Evans, 380.
 Admire shales, Carboniferous, Kansas, Adams, 10.
 Agawa formation, Algonkian, Minnesota, Clements, 209.
 Ajax quartzite, Arizona, Church, 185.
 Albuquerque marls, Pliocene, Tertiary, New Mexico, Reagan, 1003.
 Allegheny formation, Carboniferous, Pennsylvania, Campbell, 164.
 Allegheny formation (Lower Productive Coal Measures), Carboniferous, Ohio, Prosser, 982.
 Allegheny series, Carboniferous, West Virginia, White, 1301.
 Americus limestone, Carboniferous, Kansas, Adams, 10.
 Ames, or Crinoidal, limestone, Carboniferous, West Virginia, White, 1301.
 Angelina series, Tertiary, Texas, Hill, 568.

Geologic formations described—Continued.

Angola shale, Devonian, New York, Clarke, 200.
 Angolashale, Devonian, New York, Clarke, 201.
 Apache group, Cambrian?, Arizona, Ransome, 991.
 Appanoose beds, Pennsylvania series, Iowa, Beyer and Young, 78.
 Arago formation, Tertiary, Oregon, Diller, 301.
 Arbuckle limestone, Cambro-Silurian, Indian Territory, Taff, 1192.
 Arikaree formation, Miocene, Tertiary, Nebraska, Barbour, 56.
 Arikaree formation, Neocene, Tertiary, Wyoming, Smith, 1138.
 Arikaree formation, Tertiary, Nebraska, Darton, 271.
 Arikaree formation, Tertiary, Nebraska, Darton, 271.
 Atchison shales (Wabaunsee), Carboniferous, Nebraska, Barbour, 56.
 Atlantosaurus beds, Cretaceous, Rocky Mountain region, Lee, 785.
 Atlantosaurus beds, Jurassic, Colorado and Wyoming, Hatcher, 507.
 Aubrey group, Arizona, Reagan, 1005.
 Aubrey and Super-Aubrey, Carboniferous, Utah, Huntington and Goldthwait, 623.
 Aubrey limestone and sandstone, Nevada, Spurr, 1155.
 Baird shales, Carboniferous, California, Diller, 302.
 Bakersville gabbro, Juratrias, North Carolina, Keith, 659.
 Bandera shales, Carboniferous, Kansas, Adams, 10.
 Bangor limestone, Carboniferous, Tennessee, Stevenson, 1182.
 Barclay limestone, Carboniferous, Kansas, Adams, 10.
 Basal beds, Eocene, Texas, Dumble, 332.
 Beacon Hill formation, pre-Pleistocene, New Jersey, Salisbury, 1053.
 Bearpaw shales, Cretaceous, Montana, Hatcher and Stanton, 513.
 Bear River formation, Cretaceous, Wyoming, Stanton, 1166.
 Beaumont clays, Pleistocene, Texas, Hayes and Kennedy, 532.
 Beaver limestone, Cambrian, Georgia, Watson, 1272.
 Becraft limestone, Devonian, New Jersey, Weller, 1291.
 Becraft limestone, Devonian, New York, Grabau, 465.
 Becraft limestone, Devonian, New York, Van Ingen and Clark, 1240.
 Becraft limestone, Devonian, Maryland, Schuchert, 1092.
 Becraft limestone, Devonian, New York, Clarke, 201.
 Bedford, Carboniferous, Pennsylvania, Stevenson, 1182.
 Bedford limestone, Carboniferous, Indiana, Newsom, 929.
 Bedford oolitic limestone, Carboniferous, Indiana, Hopkins, 604.

Geologic formations described—Continued.

- Bedford oolitic limestone, Lower Carboniferous, Indiana, Ashley, 40.
- Bedford shale, Carboniferous, Ohio, Prosser, 982.
- Beech granite, Archean, North Carolina and Tennessee, Keith, 659.
- Beekmantown limestone, Champlainic, New York, Clarke, 201.
- Beekmantown stage, Ordovician, Pennsylvania, Collie, 228.
- Belfast bed, Silurian, Ohio, Prosser, 982.
- Bellton stage, Carboniferous, West Virginia, White, 1301.
- Bellvale flags, Devonian, New Jersey, Weller, 1291.
- Bellvale flags, Devonian, New York, Clarke, 201.
- Belly River beds, Cretaceous, Canada, Hatcher, 510.
- Belly River beds, Cretaceous, Canada, Hatcher and Stanton, 513.
- Bennington limestone, Cretaceous, Indian Territory, Taff, 1192.
- Benton formation, Cretaceous, Nebraska, Barbour, 56.
- Benton formation, Cretaceous, Nebraska, Harmony, 171.
- Benton formation, Cretaceous, South Dakota, Todd, 1208, 1209, 1210.
- Benton formation, Cretaceous, South Dakota, Todd and Hall, 1211.
- Berea grit, Carboniferous, Ohio, Bownocker, 117a.
- Berea grit, Carboniferous, Ohio, Prosser, 982.
- Berea grit, Carboniferous, Stevenson, Ohio, 1182.
- Berea shale, Carboniferous, Ohio, Stevenson, 1182.
- Berkeleyan, California, Lawson, 776.
- Bertie formation (lower Waterlime), Silurian, New York, proposed for Rondout, Schuchert, 1089.
- Bertie waterlime, Ontario, New York, Clarke, 201.
- Bethany Falls limestone, Carboniferous, Missouri, Gallaher, 429.
- Bigby limestone, Ordovician, Tennessee, Hayes and Ulrich, 533.
- Big Injun, Carboniferous, West Virginia, Stevenson, 1182.
- Big Injun series, Carboniferous, Ohio, Bownocker, 117a.
- Birch Creek series, Alaska, Collier, 229.
- Birmingham shale, Carboniferous, West Virginia, White, 1301.
- Bisbee group, Cretaceous, Arizona, Ransome, 994.
- Biwabik formation, included in Upper Huronian, Minnesota, Clements, 209.
- Biwabik formation, included in Upper Huronian series, Algonkian, Minnesota, Leith, 786.
- Black Hand formation, Carboniferous, Ohio, Prosser, 982.
- Black River limestone, Ordovician, Missouri, Gallaher, 429.

Geologic formations described—Continued.

- Black River stage, Ordovician, Pennsylvania, Collie, 228.
- Blanco beds, Pliocene, Tertiary, Texas, Gidley, 440.
- Blowing Rock gneiss, Archean, North Carolina, Keith, 659.
- Bokchito formation, Cretaceous, Indian Territory, Taff, 1192.
- Bolinas sandstone, California, Lawson, 776.
- Bolsa quartzite, Cambrian, Arizona, Ransome, 994.
- Bolton gneiss, Massachusetts, Perry and Emerson, 971.
- Bonita sandstone, California, Lawson, 776.
- Bossardville limestone, Silurian, New Jersey, Weller, 1291.
- Bragdon formation, Carboniferous, California, Diller, 302.
- Bretonian division, Cambrian, Canada, Matthew, 858.
- Bridgeton formation, Pleistocene, New Jersey, Salisbury, 1053.
- Brimfield schist, Massachusetts, Perry and Emerson, 971.
- Brownspout bed, Silurian, Tennessee, Foerste, 408.
- Brule clay, Oligocene, Tertiary, Nebraska, Barbour, 56.
- Brule clay, Tertiary, Nebraska, Darton, 271.
- Brule formation (Oligocene), Tertiary, Wyoming, Smith, 1138.
- Buchanan gravels, Quaternary, Iowa, Calvin, 158.
- Buda limestone, Cretaceous, Texas, Shattuck, 1098.
- Buffalo sandstone, Carboniferous, West Virginia, White, 1301.
- Burden conglomerate, Ordovician, New York, Grabau, 465.
- Burlingame shales, Carboniferous, Kansas, Adams, 10.
- Burlington-Keokuk or Carthage limestone, Carboniferous, Missouri, Gallaher, 429.
- Caequabic granite, Algonkian, Minnesota, Clements, 209.
- Caddo limestone, Cretaceous, Indian Territory, Taff, 1192.
- Calceiferous, Ordovician, Missouri, Gallaher, 429.
- Calera limestone, California, Lawson, 776.
- Calhoun shales, Carboniferous, Kansas, Adams, 10.
- Callaway limestone, Devonian, Missouri, Gallaher, 429.
- Cambridge, Upper and Lower, limestone, Carboniferous, West Virginia, White, 1301.
- Camden chert, Devonian, Tennessee, Foerste, 408.
- Camden series, Tertiary, Texas, Hill, 568.
- Camillus shale, Ontario, New York, Clarke, 201.
- Campan, California, Lawson, 776.
- Campbells Creek limestone, Carboniferous, West Virginia, White, 1301.
- Canaan shales, Carboniferous, West Virginia, Stevenson, 1182.

Geologic formations described—Continued.

- Canadian, Champlainie, New York, Clarke, 201.
- Canandaigua shale, Devonian, New York, Clarke, 201.
- Cancy shale, Carboniferous, Indian Territory, Taff, 1192.
- Cannelton (Stockton) limestone, Carboniferous, West Virginia, White, 1301.
- Cape May formation, Pleistocene, New Jersey, Salisbury, 1053.
- Carmichael clay, Quaternary, Pennsylvania, Campbell, 164.
- Carolina gneiss, Archean, North Carolina, Keith, 659.
- Carters limestone, Ordovician, Tennessee, Hayes and Ulrich, 533.
- Carthage limestone, Carboniferous, Missouri, Gallaher, 429.
- Cascade formation, Cretaceous, Montana, Stanton, 1166.
- Cashaqua shales, Devonian, New York, Luther, 820.
- Cashaqua shale, Devonian, New York, Clarke, 201.
- Cashaqua shales, Devonian, New York, Clarke, 200.
- Cassville plant shale, Carboniferous, West Virginia, White, 1301.
- Catheys formation, Ordovician, Tennessee, Hayes and Ulrich, 533.
- Catskill beds, Devonian, New York, Clarke, 201.
- Catskill sandstone, Devonian, Claypole, 206.
- Cattaraugus beds, Carbonian, New York, Clarke, 201.
- Cattaraugus beds, Carboniferous, New York, Clarke, 197.
- Cattaraugus beds, Devonian, New York, Glenn, 459.
- Cattaraugus formation, Devonian, Pennsylvania, Fuller and Alden, 423, 424.
- Cayugan, Ontario, New York, Clarke, 201.
- Cedar Valley stage, Devonian, Iowa, Calvin, 158.
- Cedar Valley stage, Devonian, Iowa, Savage, 1071.
- Cedarville limestone, Silurian, Ohio, Prosser, 982.
- Centerfield limestone, Devonian, New York, Clarke, 201.
- Chadron formation, Oligocene, Tertiary, Nebraska, Barbour, 56.
- Chadron formation, Tertiary, Nebraska, Darton, 271.
- Chadron formation (Oligocene), Tertiary, Wyoming, Smith, 1138.
- Chagrin formation, Devonian, Ohio, Prosser, 982.
- Champlainie, New York, Clarke, 201.
- Chanute shales, Carboniferous, Kansas, Adams, 10.
- Chariton conglomerate, Pennsylvanian series, Beyer and Young, 78.
- Charleston sandstone, Carboniferous, West Virginia, Campbell, 166.
- Chattahoochee group, Tertiary, Florida, Dall, 261.

Geologic formations described—Continued.

- Chattanooga shale, Devonian, Tennessee, Hayes and Ulrich, 533.
- Chattanooga black shale, Devonian, Tennessee, Foerste, 408.
- Chautauquan, Devonian, New York, Clarke, 201.
- Chemung beds, Devonian, New York, Clarke, 201.
- Chemung formation, Devonian, Pennsylvania, Fuller and Alden, 423, 424.
- Chemung shales, Devonian, New York, Glenn, 459.
- Chemung period, Devonian, New York, Schneider, 1077.
- Cherokee shales, Carboniferous, Kansas, Adams, 10.
- Cherryville shales, Carboniferous, Kansas, Adams, 10.
- Chester group, Carboniferous, Kentucky, Ulrich and Smith, 1223.
- Chico, California, Lawson, 776.
- Chipola beds, Tertiary, Florida, Dall, 261.
- Chico formation, Cretaceous, Oregon, Washburne, 1255.
- Chitstone limestone, Carboniferous, Alaska, Schrader and Spencer, 1084.
- Chitstone limestone, probably Permian, Alaska, Mendenhall and Schrader, 880.
- Chouteau beds, Carboniferous, Missouri, Gallaher, 429.
- Chuar series, Nevada, Spurr, 1155.
- Cincinnati group, Ordovician, Tennessee, Foerste, 407.
- Cincinnati series, Ordovician, Ohio, Indiana, and Kentucky, Foerste, 409.
- Cincinnati, Champlainie, New York, Clarke, 201.
- Cincinnati flags, Devonian, New York, Clarke, 201.
- Cintura formation, Cretaceous, Arizona, Ramsage, 994.
- Claggett formation, Cretaceous, Montana, Hatcher and Stanton, 513.
- Claiborne, Lower, Eocene, Tertiary, Georgia, Harris, 504.
- Claiborne, Lower, stage, Eocene, Texas, Dumble, 332.
- Claibornian, Tertiary, Florida, Dall, 261.
- Clarendon beds, Miocene, Tertiary, Texas, Gidley, 40.
- Clarion sandstone, Carboniferous, West Virginia, White, 1301.
- Clarksburg limestone, Carboniferous, West Virginia, White, 1301.
- Cleveland shale, Devonian, Ohio, Claypole, 206.
- Cleveland shale, Devonian, Ohio, Prosser, 982.
- Clifton limestone, Silurian, Tennessee, Hayes and Ulrich, 533.
- Clifton limestone, Tennessee, Foerste, 410.
- Clifton limestone, equivalent to Niagara, Silurian, Tennessee, Foerste, 408.
- Clinton, Silurian, Ohio, Bownocker, 117a.
- Clinton beds, Silurian, Missouri, Gallaher, 429.
- Clinton formation, Silurian, Ohio, Bownocker, 117.

Geologic formations described—Continued.

- Clinton group, Silurian, New York, Schneider, 1077.
 Clinton limestone, Silurian, Indiana, Newsom, 929.
 Clinton limestone, Silurian, Ohio, Prosser, 982.
 Clinton limestone, Silurian, Tennessee, Foerste, 408.
 Coalbrook schist, pre-Cretaceous, Oregon, Diller, 301.
 Coal Measures, Carboniferous, Missouri, Gallaher, 429.
 Coal Measures, Carboniferous, Ohio, Bow-nocker, 117a.
 Coast clays, Pleistocene, Texas, Dumble, 332.
 Cobleskill, Silurian, New York, Van Ingen and Clark, 1240.
 Cobleskill (Coralline limestone), Silurian, New York, Schuchert, 1089.
 Cobleskill limestone, Ontario, New York, Clarke, 201.
 Cobleskill limestone, Silurian, New York, Hartagel, 505.
 Coeymans limestone, Devonian, New Jersey, Weller, 1291.
 Coeymans limestone, Devonian, New York, Grabau, 465.
 Coeymans limestone, Devonian, New York, Van Ingen and Clarke, 1240.
 Coeymans limestone, Devonian, Maryland, Schuchert, 1092.
 Coeymans limestone, Devonian, New York, Clarke, 201.
 Coffee sand, Tennessee, Foerste, 408.
 Coldbrook terrane, Cambrian, Canada, Mat-thew, 858.
 Colorado group, Cretaceous, South Dakota, Todd, 1208, 1209, 1210.
 Colorado group, Cretaceous, South Dakota, Todd and Hall, 1211.
 Colob sandstone, Jurassic, Utah, Huntington and Goldthwait, 623.
 Columbia sands, Pleistocene, Texas, Hayes and Kennedy, 532.
 Columbus limestone, Devonian, Ohio, Prosser, 982.
 Como beds, Jurassic, Wyoming, Stanton, 1166.
 Conasauga shale, Cambrian, Georgia, Wat-son, 1272.
 Conemaugh formation, Carboniferous Penn-sylvania, Campbell, 164.
 Conemaugh formation (Lower Barren Coal Measures), Carboniferous, Ohio, Prosser, 982.
 Conemaugh series, Carboniferous, West Vir-ginia, White, 1301.
 Connellsville sandstone, Carboniferous, West Virginia, White, 1301.
 Connellsville sandstone, member of Cone-maugh formation, Carboniferous, Pennsyl-vania, Campbell, 164.
 Contention series, Arizona, Blake, 86.
 Contention shale, Arizona, Church, 185.
 Conway granite, Azoic, New Hampshire, Perry, 970.
 Cook Mountain beds, Eocene, Tertiary, Texas, Hayes and Kennedy, 532.

Geologic formations described—Continued.

- Coralline limestone, Silurian, New York, Hartnagel, 505.
 Corniferous, Devonian, Ontario, Parks, 958.
 Corniferous group, Devonian, New York, Schneider, 1077.
 Corniferous limestone, Devonian, Ohio, Clay-pole, 206.
 Corniferous limestone, Devonian, Missouri, Gallaher, 429.
 Corniferous or Jeffersonville limestone, De-vonian, Indiana, Newsom, 929.
 Corniferous period, Devonian, New York, Schneider, 1077.
 Corniferous - Hamilton period, Devonian, Ohio, Claypole, 206.
 Cottonwood formation, Carboniferous, Kan-sas, Smith, 1123.
 Cottonwood limestone, Carboniferous, Kan-sas, Adams, 10.
 Cottonwood limestone, Carboniferous, Ne-braska, Barbour, 56.
 Cowiche gravels, Quaternary, Washington, Smith, 1131.
 Cranberry granite, Archean, North Carolina and Tennessee, Keith, 659.
 Crosswicks clays included in Matawan for-mation, Cretaceous, New Jersey, Berry, 76.
 Cuba sandstone, Devonian, New York, Clarke, 201.
 Cuba sandstone lentil, included in Chemung shales, Devonian, New York, Glenn, 459.
 Curzen's limestone, Carboniferous, Missouri, Gallaher, 429.
 Cuswago sandstone, member of Oil Lake group, Devonian, Pennsylvania, Stevenson, 1182.
 Cuyahoga formation, Carboniferous, Ohio, Prosser, 982.
 Cuyahoga shales, Carboniferous, Ohio, Ste-venson, 1182.
 Dakota formation, Cretaceous, Great Plains region, Stanton, 1166.
 Dakota, Cretaceous, Kansas, Jones, 653.
 Dakota formation, Cretaceous, Nebraska, Barbour, 56.
 Dakota formation, Cretaceous, Nebraska, Car-mony, 171.
 Dakota formation, Cretaceous, South Dakota, Todd, 1208, 1209, 1210.
 Dakota formation, Cretaceous, South Dakota, Todd and Hall, 1211.
 Dakota group, Cretaceous, New Mexico, John-son, 646.
 Dakota sandstone, Cretaceous, Wyoming, Smith, 1138.
 Dayton limestone, Silurian, Ohio, Prosser, 982.
 Decker Ferry formation, Silurian, New Jer-sey, Weller, 1291.
 Deepkill shale, Champlainic, New York, Clarke, 201.
 Deep River beds, Tertiary, Montana, Doug-las, 317.
 Deer Creek limestone, Carboniferous, Kan-sas, Adams, 10.
 Dennis limestone, Carboniferous, Kansas, Adams, 10.

Geologic formations described—Continued.

- Des Moines stage, Pennsylvanian series, Iowa, Beyer and Young, 78.
- Des Moines stage, Upper Carboniferous or Pennsylvanian series, Iowa, Savage, 1071.
- Diamond Peak quartzite, Nevada, Spurr, 1155.
- Dixon clay, Silurian, Tennessee, Foerste, 408.
- Dorans Cove sandstone, Carboniferous, Alabama, Stevenson, 1182.
- Doyle shales, Carboniferous, Kansas, Adams, 10.
- Dresbach formation, Cambrian, Upper, Wisconsin and Minnesota, Berkey, 74.
- Drum limestone, Carboniferous, Indian Territory, Adams, 10.
- Drum shales, Carboniferous, Kansas, Adams, 10.
- Dudley shales, Carboniferous, Kansas, Adams, 10.
- Duluth gabbro, included in Keweenaw, Minnesota, Clements, 209.
- Duluth gabbro, included in Keweenaw, Minnesota, Leith, 786.
- Dunkard formation, Carboniferous, Pennsylvania, Campbell, 164.
- Dunkard formation (Upper Barren Coal Measures), Carboniferous, Ohio, Prosser, 982.
- Dunkard series, Carboniferous, West Virginia, White, 1301.
- Dunkirk shale, Devonian, New York, Clarke, 201.
- Dunkirk shales, Devonian, New York, Clarke, 200.
- Eagle formation, Cretaceous, Montana, Hatcher and Stanton, 513.
- Eagle limestone, Carboniferous, West Virginia, White, 1301.
- Earlton limestone, Carboniferous, Kansas, Adams, 10.
- Easton schist, pre-Eocene, Washington, Smith, 1132.
- Elk Lick limestone, Carboniferous, West Virginia, White, 1301.
- Ellensburg formation, Miocene, Tertiary, Washington, Smith, 1131, 1132.
- Elmdale formation, Carboniferous, Kansas, Adams, 10.
- Ely greenstone, Archean, Minnesota, Clements, 209.
- Embarrass granite, included in Keweenaw, Minnesota, Leith, 786.
- Emerald limestone, Arizona, Church, 185.
- Emerald series, Arizona, Blake, 86.
- Empire formation, Tertiary, Oregon, Diller, 301.
- Emporia limestone, Carboniferous, Kansas, Adams, 10.
- Equus beds, Pleistocene, Texas, Dumble, 332.
- Erian, Devonian, New York, Clarke, 201.
- Erie shale, Devonian, Ohio, Stevenson, 1182.
- Erwin quartzite, Cambrian, Tennessee, Keith, 659.
- Escabrosa limestone, Carboniferous, Arizona, Ransome, 994.
- Eskridge shales, Carboniferous, Kansas, Adams, 10.
- Esmeralda formation, Nevada, Spurr, 1155.

Geologic formations described—Continued.

- Esopus grit, Devonian, New Jersey, Weller, 1291.
- Esopus grit, Devonian, New York, Grabau, 465.
- Esopus grit, Devonian, New York, Van Ingen and Clark, 1240.
- Esopus grit, Devonian, New York, Clarke, 201.
- Etcheminian terrane, Cambrian, Canada, Matthew, 858.
- Eureka quartzite, Nevada, Spurr, 1155.
- Eutaw formation, Cretaceous, Alabama, Smith, 1126.
- Fayette sands, Eocene, Texas, Dumble, 332.
- Fayette sands, Eocene, Tertiary, Texas, Hayes and Kennedy, 532.
- Fayette sands, Tertiary, Texas, Hill, 568.
- Fernvale formation, Ordovician, Tennessee, Hayes and Ulrich, 533.
- Fish Creek sandstone, Carboniferous, West Virginia, White, 1301.
- Flattop schist, Algonkian?, North Carolina, Keith, 659.
- Fleming beds (Frio clays), Tertiary, Texas, Hill, 568.
- Flint Creek beds, Tertiary, Montana, Douglass, 317.
- Florence flint, Carboniferous, Kansas, Adams, 10.
- Floyd shale, Carboniferous, Tennessee, Stevenson, 1182.
- Forbes limestone, Carboniferous, Missouri, Gallaher, 429.
- Forest City sandstone, Carboniferous, Missouri, Gallaher, 429.
- Fort Benton group, Cretaceous, New Mexico, Johnson, 646.
- Fort Logan beds, Tertiary, Montana, Douglass, 317.
- Fort Payne chert, Carboniferous, Tennessee, Stevenson, 1182.
- Fort Pierre group, Cretaceous, New Mexico, Johnson, 646.
- Fort Riley limestone, Carboniferous, Kansas, Adams, 10.
- Fort Scott limestone, Carboniferous, Indian Territory, Adams, 10.
- Fort Scott limestone, Carboniferous, Kansas, Adams, 10.
- Fort Union beds, Cretaceous, New Mexico, Reagan, 1003.
- Fortymile series, Alaska, Collier, 229.
- Fox Hills [formation], Cretaceous, New Mexico, Reagan, 1003.
- Franciscan, California, Lawson, 776.
- Franconia sandstone, Upper Cambrian, Wisconsin and Minnesota, Berkey, 74.
- Franks conglomerate, Carboniferous, Indian Territory, Taft, 1192.
- Freeport, Lower, sandstone, Carboniferous, West Virginia, White, 1301.
- Freeport, Upper, limestone, Carboniferous, West Virginia, White, 1301.
- Frio clays, Eocene, Texas, Dumble, 332.
- Frio clays, Eocene, Tertiary, Texas, Hayes and Kennedy, 532.
- Galena-Trenton formation, Ordovician, Iowa, Calvin, 158.

Geologic formations described—Continued.

- Galesburg shales, Carboniferous, Kansas, Adams, 10.
- Galisteosand group, Cretaceous, New Mexico, Johnson, 646.
- Gardeau flags, Devonian, New York, Clarke, 201.
- Gardeau shales and flags, Devonian, New York, Luther, 820.
- Garrison formation, Carboniferous, Kansas, Adams, 10.
- Genesee black shale, Devonian, Missouri, Gallaway, 429.
- Genesee shale, Devonian, New York, Clarke, 201.
- Genesee shales, Ontario, Parks, 958.
- Genesee shales, Devonian, New York, Luther, 820.
- Genesee slate, Devonian, New York, Schneider, 1077.
- Geneva limestone, Devonian, Indiana, Newsom, 929.
- Genundewa limestone, Devonian, New York, Luther, 820.
- Georgia slates, Cambrian, New York, Clarke, 201.
- Gering formation, Miocene, Tertiary, Nebraska, Barbour, 56.
- Gering formation, Tertiary, Nebraska, Darton, 271.
- Giants Range granite, Algonkian, Minnesota, Clements, 209.
- Gila conglomerate, Pleistocene?, Arizona, Ransome, 991.
- Gilboy sandstone, Carboniferous, West Virginia, White, 1301.
- Gilmore sandstone, Carboniferous, West Virginia, White, 1301.
- Glance conglomerate, Cretaceous, Arizona, Ransome, 994.
- Glenkirk limestone, Silurian, Tennessee, Foerste, 408.
- Glenn formation, Pennsylvanian, Carboniferous, Indian Territory, Taff, 1192.
- Globe limestone, Devonian and Carboniferous, Arizona, Ransome, 991.
- Goodland limestone, Cretaceous, Indian Territory, Taff, 1192.
- Goodnight (Paloduro) beds, Miocene, Tertiary, Texas, Gidley, 440.
- Grainger shale, Devonian, Virginia and Tennessee, Stevenson, 1182.
- Grand Canyon group, Nevada, Spurr, 1155.
- Grand Gulf formation, Smith and Aldrich, 1127.
- Grand Gulf formation, Tertiary, Gulf region, Dall, 262.
- Grand Gulf formation, Tertiary, Gulf region, Hilgard, 565.
- Graneros formation, Cretaceous, Wyoming, Smith, 1138.
- Great limestone, Carboniferous, West Virginia, White, 1301.
- Greenbrier limestone, Virginia, Eckel, 352.
- Greenbrier limestone, Carboniferous, Maryland, Virginia, and West Virginia, Stevenson, 1182.

Geologic formations described—Continued.

- Greenbrier limestone lentil, Carboniferous, Pennsylvania, Campbell, 164.
- Green Pond conglomerate, Silurian, New Jersey, Weller, 1231.
- Grenville series, Canada, Coleman, 224.
- Grimes sandstone, Devonian, New York, Clarke, 200.
- Grimes sandstone, Devonian, New York, Luther, 820.
- Grimes sandstone, Devonian, New York, Clarke, 201.
- Guelph, Silurian, New York and Ontario, Clarke and Rudemann, 204.
- Guelph dolomite, Ontario, New York, Clarke, 201.
- Guernsey formation, Carboniferous, Wyoming, Smith, 1138.
- Gunflint formation, included in Upper Huronian (Animikie), Minnesota, Clements, 209.
- Gypsum series, New Mexico, Reagan, 1003.
- Hamburg limestone and shale, Nevada, Spurr, 1155.
- Hamilton beds, Devonian, New York, Clarke, 201.
- Hamilton formation, Devonian, New York, Cleland, 207.
- Hamilton formation, Ontario, Parks, 958.
- Hamilton group, Devonian, New York, Schneider, 1077.
- Hamilton (Callaway) limestone, Devonian, Missouri, Gallaher, 429.
- Hampshire for Catskill, Devonian, Appalachian region, Stevenson, 1182.
- Hampton shale, Cambrian, North Carolina and Tennessee, Keith, 659.
- Hannibal shales, Devonian, Missouri, Gallaher, 429.
- Hardin sandstone, Devonian, Tennessee, Foerste, 408.
- Hardyston quartzite, Cambrian, New Jersey, Weller, 1291.
- Harrodsburg limestone, Carboniferous, Indiana, Newsom, 929.
- Harrodsburg limestone, Lower Carboniferous, Indiana, Ashley, 40.
- Harrodsburg limestones and shales, Carboniferous, Indiana, Hopkins, 604.
- Hartford limestone, Carboniferous, Kansas, Adams, 10.
- Hartselle sandstones, Carboniferous, Alabama, Stevenson, 1182.
- Hartville formation, Carboniferous, Wyoming, Smith, 1138.
- Hastings series, Canada, Coleman, 224.
- Hatch flags and sands, Devonian, New York, Luther, 820.
- Hatch shales and flags, Devonian, New York, Clarke, 200.
- Hawkins formation, pre-Eocene, Washington, Smith, 1132.
- Hazlet sands, included in Matawan formation, Cretaceous, New Jersey, Berry, 76.
- Helderbergian, Devonian, New York, Clarke, 201.
- Hermitage formation, Ordovician, Tennessee, Hayes and Ulrich, 533.

Geologic formations described—Continued.

- Herschel quartzite, Arizona, Church, 185.
 Hertha limestone, Carboniferous, Kansas, Adams, 10.
 Highpoint sandstone, Devonian, New York, Clarke, 201.
 Hilliard formation, Cretaceous, Wyoming, Knight, 695.
 Hillsboro sandstone, Silurian, Ohio, Prosser, 982.
 Hinton formation, Carboniferous, West Virginia, Stevenson, 1182.
 Hosselkuss limestone, Triassic, California, Diller, 302.
 Howard limestone, Carboniferous, Kansas, Adams, 10.
 Hudson River beds, Ordovician, Missouri, Gallaher, 429.
 Hudson River (or Cincinnati) group, Ordovician, Indiana, Newsom, 929.
 Hudson River shales, Ordovician, New York, Grabau, 465.
 Hudson River slates, Ordovician, New Jersey, Weller, 1291.
 Humboldt series, Nevada, Spurr, 1155.
 Huntingdon, Carboniferous, Pennsylvania, Stevenson, 1182.
 Hunton limestone, Siluro-Devonian, Indian Territory, Taft, 1192.
 Huron group, Lower Carboniferous, Indiana, Ashley, 40.
 Huron limestone and sandstone, Carboniferous, Indiana, Hopkins, 604.
 Huron shale, Devonian, Ohio, Prosser, 982.
 Huronian, Ontario, Bolton, 98.
 Huronian, Canada, Coleman, 224.
 Huronian, Ontario, Graton, 478.
 Huronian, Lower, Minnesota, Clements, 209.
 Huronian, Upper (Animikie), Minnesota, Clements, 209.
 Huronian series, Lower, Algonkian, Minnesota, Leith, 786.
 Huronian series, Upper, Algonkian, Minnesota, Leith, 786.
 Idaho formation, Tertiary, Idaho, Lindgren and Drake, 806.
 Illinoian drift, Quaternary, Ohio, Prosser, 982.
 Iola limestone, Carboniferous, Kansas, Adams, 10.
 Iowan drift, Quaternary, Iowa, Savage, 1071.
 Iowan drift (?), Quaternary, Ohio, Prosser, 982.
 Iowan loess, Quaternary, Iowa, Calvin, 158.
 Iowan till, Quaternary, Iowa, Calvin, 158.
 Irondale limestone, Carboniferous, West Virginia, White, 1301.
 Ithaca beds, Devonian, New York, Clarke, 201.
 Jacksonboro white limestone, Tertiary, Florida, Dall, 261.
 Jameo gravels, Quaternary, New York, Veatch, 1247.
 Jeffersonville limestone, Devonian, Indiana, Newsom, 929.
 Jemez marls, Pliocene, Tertiary, New Mexico, Reagan, 1003.

Geologic formations described—Continued.

- Jennings for Chemung, Devonian, Appalachian region, Stevenson, 1182.
 Johannian division, Cambrian, Canada, Mathew, 858.
 Judith River beds, Cretaceous, Montana, Hatcher, 510, 512.
 Judith River beds, Cretaceous, Montana, Hatcher and Stanton, 513.
 Judith River beds, Cretaceous, Montana, Osborn, 950.
 Judith River beds, Montana, Sternberg, 1178.
 Kanab, Upper and Lower, Triassic, Utah, Huntington and Goldthwait, 623.
 Kanawha black flint, Carboniferous, West Virginia, White, 1301.
 Kanawha series, Carboniferous, West Virginia, White, 1301.
 Kansan drift, Quaternary, Iowa, Macbride, 824.
 Kansan drift, Quaternary, Iowa, Savage, 1071.
 Kansan till, Quaternary, Iowa, Calvin, 158.
 Kansas City limestone, Carboniferous, Missouri, Gallaher, 429.
 Kanwaka shales, Carboniferous, Kansas, Adams, 10.
 Karquinez, California, Lawson, 776.
 Kaskaskia group, Carboniferous, Indiana, Newsom, 929.
 Kaskaskia limestone, Carboniferous, Missouri, Gallaher, 429.
 Kenai series, Eocene, Tertiary, Alaska, Collier, 229.
 Kennicott formation, Jura-Cretaceous, Alaska, Mendenhall and Schrader, 880.
 Kennicott formation, Upper Jurassic or Lower Cretaceous, Alaska, Schrader and Spencer, 1084.
 Keweenawan, Minnesota, Clements, 209.
 Keweenawan, Minnesota, Leith, 786.
 Klutina series, pre-Silurian (?), Alaska, Schrader and Spencer, 1084.
 Knapp beds, Carbonic, New York, Clarke, 201.
 Knapp beds, Carboniferous, New York, Glenn, 459.
 Knife Lake slates, Algonkian, Minnesota, Clements, 209.
 Knobstone, Carboniferous, Kentucky, Stevenson, 1182.
 Knobstone, Lower Carboniferous, Indiana, Ashley, 40.
 Knobstone group, Carboniferous, Indiana, Newsom, 929.
 Knobstone (Upper) shale, included in Knobstone group, Carboniferous, Indiana, Newsom, 929.
 Knobstone shales and sandstones, Carboniferous, Indiana, Hopkins, 604.
 Knobstone sandstone, Carboniferous, Indiana, included in Knobstone group, Newsom, 929.
 Knox dolomite, Ordovician, Georgia, Watson, 1272.
 Knoxville, California, Lawson, 776.
 Knoxville formation, Cretaceous, Oregon, Washburne, 1265.

Geologic formations described—Continued.

- Kiamichi formation, Cretaceous, Indian Territory, Taff, 1192.
- Kilbuck conglomerate, Carbonic, New York, Clarke, 201.
- Kilbuck conglomerate lentil, included in Cattaraugus beds, Devonian, New York, Glenn, 459.
- Kinderhook stage, Lower Carboniferous or Mississippian series, Iowa, Savage, 1071.
- Kingston beds, Devonian, New Jersey, Weller, 1291.
- Kittatinny limestone, Cambrian and Ordovician, New Jersey, Weller, 1291.
- Koipato formation, Nevada, Spurr, 1155.
- Labette shales, Carboniferous, Kansas, Adams, 10.
- Lafayette sands, Neocene, Texas, Hayes and Kennedy, 532.
- Lagarto beds, Neocene, Texas, Dumble, 332.
- Lagarto clays, Texas, Dumble, 330.
- Lakota formation, Cretaceous, Black Hills region, Stanton, 1166.
- Lance Creek (Ceratops) beds, Cretaceous, Wyoming, Hatcher, 510.
- Lane shales, Carboniferous, Kansas, Adams, 10.
- Laona sandstone, Devonian, New York, Clarke, 200.
- Laona sandstone, Devonian, New York, Clarke, 201.
- Lapara beds, Neocene, Texas, Dumble, 332.
- Laramie, Cretaceous, Wyoming, Knight, 695.
- Laramie formation, Cretaceous, Hay, 514.
- Laramie formation, Cretaceous, Nebraska, Barbour, 56.
- Lauderdale chert, Carboniferous, Alabama, Stevenson, 1182.
- Laurel limestone, Silurian, Tennessee, Foerste, 408.
- Laurentian, Ontario, Bolton, 98.
- Laurentian, Ontario, Graton, 478.
- Lebanon limestone, Ordovician, Tennessee, Hayes and Ulrich, 531.
- Lecompton limestone, Carboniferous, Kansas, Adams, 10.
- Lego limestone, Silurian, Tennessee, Foerste, 408.
- Leipers formation, Ordovician, Tennessee, Hayes and Ulrich, 533.
- Leipers Creek limestone, Cincinnati group, Ordovician, Tennessee, Foerste, 407.
- Le Roy shales, Carboniferous, Kansas, Adams, 10.
- Liberty beds, included in Richmond group, Ordovician, Ohio and Indiana, Nickles, 932.
- Lignitic stage, Eocene, Texas, Dumble, 332.
- Linden bed, Devonian, Tennessee, Foerste, 408.
- Linden limestone, Tennessee, Foerste, 410.
- Linville metadiabase, Algonkian?, North Carolina and Tennessee, Keith, 659.
- Little Cottonwood granite, Utah, Emmons, 372.
- Little Falls dolomite, Champlainie, New York, Clarke, 201.

Geologic formations described—Continued.

- Lockport dolomite, Ontario, New York, Clarke, 201.
- Logan, Carboniferous, Ohio, Stevenson, 1182.
- Logan, upper part of Pocono, Carboniferous, Appalachian region, Stevenson, 1182.
- Logan formation, Carboniferous, Ohio, Prosser, 982.
- Logan group, Carboniferous, Ohio, Bownocker, 117a.
- Logan sills, Minnesota, included in Keweenawan, Clements, 209.
- Lone Mountain limestone, Nevada, Spurr, 1155.
- Long Beards rifts sandstone, Devonian, New York, Luther, 820.
- Longbeards rifts sandstone, Devonian, New York, Clarke, 201.
- Longwood sandstone, Silurian, New Jersey, Weller, 1291.
- Lorraine beds, Champlainie, New York, Clarke, 201.
- Lorraine formation, Ordovician, Ohio, Prosser, 982.
- Lorraine stage, Ordovician, Pennsylvania, Collie, 228.
- Lost Guleh monzonite, Arizona, Ransome, 991.
- Louisiana limestone, Devonian, Missouri, Gallaher, 429.
- Louisville limestone, Silurian, Tennessee, Foerste, 408.
- Loup Fork beds, Tertiary, Nebraska, Barbour, 56.
- Loup Fork formation, Tertiary, Montana, Douglass, 317.
- Loup Fork stage, Miocene, Tertiary, Texas, Gidley, 440.
- Lower Helderberg, Silurian, Ohio, Bownocker, 117a.
- Lower Helderberg period, Silurian, New York, Schneider, 1077.
- Lower Helderberg or Waterline formation, Ontario, Parks, 958.
- Lowville limestone, Champlainie, New York, Clarke, 201.
- Lucas limestone, Silurian, Ohio, Prosser, 982.
- Lucky Cuss limestone, Arizona, Church, 185.
- Lufkin deposits (Yegua), Tertiary, Texas, Hill, 568.
- McCloud limestone, Carboniferous, California, Diller, 302.
- McCloud shale, Carboniferous, California, Diller, 302.
- Madera diorite, pre-Cambrian, Arizona, Ransome, 991.
- Madison formation, included in Richmond group, Ordovician, Ohio and Indiana, Nickles, 932.
- Madison Valley beds, Tertiary, Montana, Douglass, 317.
- Madrid coal group, Cretaceous, New Mexico, Johnson, 646.
- Mahoning limestone, Carboniferous, West Virginia, White, 1301.
- Mahonings sandstone, Carboniferous, Missouri, Gallaher, 429.

Geologic formations described—Continued.

- Mahoning sandstone, member of Conemaugh formation, Carboniferous, Pennsylvania, Campbell, 164.
- Mahoning sandstone stage, Carboniferous, West Virginia, White, 1301.
- Manastash formation, Eocene, Washington, Smith, 1132.
- Manhasset beds, Quaternary, New York, Veatch, 1247.
- Manlius limestone, Silurian, New Jersey, Weller, 1291.
- Manlius limestone, Silurian, New York, Grabau, 465.
- Manlius limestone, Silurian, New York, Hartnagel, 505.
- Manlius, Silurian, New York, Schuchert, 1089.
- Manlius limestone, Silurian, New York, Van Ingen and Clark, 1240.
- Manlius formation, Ontario, Maryland, Schuchert, 1092.
- Manlius limestone, Ontario, New York, Clarke, 201.
- Mannie shale, included in Richmond, Ordovician, Tennessee, Foerste, 407.
- Mansfield sandstone, Carboniferous, Indiana, Newsom, 929.
- Maquoketa or Hudson River, Ordovician, Iowa, Calvin, 158.
- Marcellus shale, Devonian, New York, Schneider, 1077.
- Marcellus shales, included in Hamilton, Devonian, New York, Cleland, 207.
- Marietta sandstones, Carboniferous, West Virginia, White, 1301.
- Marine beds, Eocene, Texas, Dumble, 332.
- Marion formation, Carboniferous, Kansas, Adams, 10.
- Martin limestone, Devonian, Arizona, Ransome, 994.
- Martinez, California, Lawson, 776.
- Mason shales, Carboniferous, West Virginia, White, 1301.
- Matawan formation, Cretaceous, New Jersey, Berry, 76.
- Matfield shales, Carboniferous, Kansas, Adams, 10.
- Mauch Chunk, Lower Carboniferous, Appalachian region, Stevenson, 1182.
- Mauch Chunk formation, Carboniferous, Pennsylvania, Campbell, 164.
- Mauch Chunk formation, Carboniferous, Pennsylvania, Fuller and Alden, 424.
- Mauch Chunk shale, Carboniferous, Pennsylvania, Fuller and Alden, 423.
- Maxville limestone, Carboniferous, Ohio, Prosser, 982.
- Maxville limestone, Lower Carboniferous, Ohio, Stevenson, 1182.
- Meadville shales, Carboniferous, Pennsylvania, Stevenson, 1182.
- Medina sandstone, Silurian, New Jersey, Weller, 1291.
- Medina shales, Silurian, Ohio, Prosser, 932.
- Mentor beds, included in the Dakota, Cretaceous, Kansas, Jones, 653.

Geologic formations described—Continued.

- Merced, California, Lawson, 776.
- Mercer group, Carboniferous, Appalachian region, White, 1299.
- Merom sandstone, Carboniferous (?), Indiana, Newsom, 929.
- Middlesex shale, Devonian, New York, Clarke, 201.
- Middlesex shales, Devonian, New York, Clarke, 200.
- Millbury limestone, Massachusetts, Perry and Emerson, 971.
- Minnekahta, Permian, Carboniferous, South Dakota, Richardson, 1015.
- Minnekahta limestone (Permian?), Carboniferous, Wyoming, Smith, 1138.
- Missourian stage, Carboniferous, Iowa, Udden, 1220.
- Mitchell limestone, Carboniferous, Indiana, Hopkins, 604.
- Mitchell limestone, Carboniferous, Indiana, Newsom, 929.
- Mitchell limestone, Lower Carboniferous, Indiana, Ashley, 40.
- Mohawkian, Champlainic, New York, Clarke, 201.
- Monongahela formation, Carboniferous, Pennsylvania, Campbell, 164.
- Monongahela formation (Upper Productive Coal-measures), Carboniferous, Ohio, Prosser, 982.
- Monongahela series, Carboniferous, West Virginia, White, 1301.
- Monroe beds, Pennsylvania series, Iowa, Beyer and Young, 78.
- Monroe formation, Silurian, Ohio, Prosser, 982.
- Monroe shale, Devonian, New York, Clarke, 201.
- Monroe shales, Devonian, New Jersey, Weller, 1291.
- Montana group, Cretaceous, Nebraska, Barbour, 56.
- Monte Cristo diorite, probably pre-Permian, Alaska, Mendenhall and Schrader, 880.
- Monterey, California, Lawson, 776.
- Monterey series, Miocene, California, Arnold, 38.
- Montezuma schist, Algonkian?, North Carolina, Keith, 659.
- Moreau sandstone, Ordovician, Missouri, Galloway, 429.
- Morgantown sandstone, Carboniferous, West Virginia, White, 1301.
- Morgantown sandstone, member of Conemaugh formation, Carboniferous, Pennsylvania, Campbell, 164.
- Morita formation, Cretaceous, Arizona, Ransome, 994.
- Morrison clay, Jurassic or Lower Cretaceous Wyoming, Smith, 1138.
- Moscow shale, Devonian, New York, Clarke, 201.
- Moscow shales, included in Hamilton Devonian, New York, Cleland, 207.
- Mount Auburn bed Cincinnati series, Ordovician, Foerste, 409.

Geologic formations described—Continued.

- Mount Pleasant conglomerate, Carboniferous, Pennsylvania, Stevenson, 1182.
- Mural limestone, Cretaceous, Arizona, Ramsome, 994.
- Myrtle formation, Cretaceous, Oregon, Diller 301.
- Nabesna limestone, Permian, Alaska, Mendenhall and Schrader, 880.
- Naco limestone, Carboniferous, Arizona, Ramsome, 994.
- Naples beds, Devonian, New York, Clarke, 201.
- Neosho limestone, Carboniferous, Kansas, Smith, 1123.
- Neva limestone, Carboniferous, Kansas, Adams, 10.
- Neva limestone, Carboniferous, Kansas, Crevecoeur, 246.
- Nevada limestone, Nevada, Spurr, 1155.
- New Albany black shale, Devonian, Indiana, Ashley, 40.
- New Albany black shale (Genesee), Devonian, Indiana, Newsom, 929.
- Newfoundland grit, Devonian, New Jersey, Weller, 1291.
- Newman limestone, Carboniferous, Virginia, Stevenson, 1182.
- New Providence shale, included in Knobstone group, Carboniferous, Indiana, Newsom, 929.
- New Scotland beds, Devonian, New Jersey, Weller, 1291.
- New Scotland beds, Devonian, New York, Van Ingen and Clark, 1240.
- New Scotland beds, Devonian, New York, Clarke, 201.
- New Scotland limestone, Devonian, Maryland, Schuchert, 1092.
- New Scotland shales, Devonian, New York, Grabau, 465.
- Niagara beds, Silurian, Indiana, Kindle, 689.
- Niagara group, Silurian, Indiana, Newsom, 929.
- Niagara group, Silurian, New York, Schneider, 1077.
- Niagara group, Silurian, Ohio, Prosser, 982.
- Niagara limestone, Ontario, Parks, 958.
- Niagara limestone, Silurian, Missouri, Galla-her, 429.
- Niagaran, Ontario, New York, Clarke, 201.
- Nikolai greenstone, Alaska, Schrader and Spencer, 1084.
- Nikolai greenstone, probably Carboniferous, Alaska, Mendenhall and Schrader, 880.
- Nineveh limestone, Carboniferous, West Virginia, White, 1301.
- Nineveh sandstone, Carboniferous, West Virginia, White, 1301.
- Niobrara formation, Cretaceous, Nebraska, Barbour, 56.
- Niobrara formation, Cretaceous, South Dakota, Todd, 1208-1210.
- Niobrara formation, Cretaceous, South Dakota, Todd and Hall, 1211.
- Nishnabotna stage, Cretaceous, Iowa, Udden, 1220.

Geologic formations described—Continued.

- Normanskill shale, Champlainie, New York, Clarke, 201.
- Northbridge gneiss, Massachusetts, Perry and Emerson, 971.
- Nuttall sandstone, Carboniferous, West Virginia, White, 1301.
- Oak Grove sands, Tertiary, Florida, Dall, 261.
- Oakland, California, Lawson, 776.
- Oakville beds, Neocene, Texas, Dumble, 332.
- Ocala limestone, Tertiary, Florida, Dall, 261.
- Ocoee formation, Upper Paleozoic, Alabama, Smith, 1125.
- Ogallala formation, Pliocene (?), Tertiary, Nebraska, Barbour, 56.
- Ogallala formation, Tertiary, Nebraska, Darton, 271.
- Ogden quartzite, Nevada, Spurr, 1155.
- Ogishke conglomerate, Algonkian, Minnesota, Clements, 209.
- Ohio shale, Devonian, Ohio, Claypole, 206.
- Ohio shale, Devonian, Ohio, Prosser, 982.
- Ohio River formation, post-Carboniferous (Tertiary?), Indiana, Ashley, 40.
- Oil Lake group, Devonian, Pennsylvania, Stevenson, 1182.
- Olean conglomerate, Carbonic, New York, Clarke, 201.
- Olean conglomerate, Carboniferous, New York, Glenn, 459.
- Olentangy shale, Devonian, Ohio, Prosser, 982.
- Olpe shales, Carboniferous, Kansas, Adams, 10.
- Onaga limestone, Carboniferous, Kansas, Crevecoeur, 246.
- Oneida conglomerate, Champlainie, New York, Clarke, 201.
- Oneonta beds, Devonian, New York, Clarke, 201.
- Onondaga, Ontario, Parks, 958.
- Onondaga limestone, Devonian, New Jersey, Weller, 1291.
- Onondaga limestone, Devonian, New York, Grabau, 465.
- Onondaga limestone, Devonian, New York, Schneider, 1077.
- Onondaga limestone, Devonian, New York, Van Ingen and Clark, 1240.
- Onondaga limestone, Devonian, New York, Clarke, 201.
- Onondaga limestone, Devonian, Tennessee, Foerste, 408.
- Ontario, New York, Clarke, 201.
- Oolagah limestone, Carboniferous, Indian Territory, Adams, 10.
- Opeche, Permian, Carboniferous, South Dakota, Richardson, 1015.
- Opeche formation (Permian?), Carboniferous, Wyoming, Smith, 1138.
- Orange sands, Texas, Dumble, 330.
- Orca series, Alaska, Schrader and Spencer, 1084.
- Oread limestone, Carboniferous, Kansas, Adams, 10.
- Oriskany, Ontario, Parks, 958.
- Oriskany beds, Devonian, New York, Grabau, 465.
- Oriskany beds, Devonian, New York, Van Ingen and Clark, 1240.

Geologic formations described—Continued.

- Oriskany beds, Devonian, New York, Clarke, 201.
- Oriskany formation, Devonian, New Jersey, Weller, 1291.
- Oriskany formation, Devonian, Maryland, Schuchert, 1092.
- Oriskany period, Devonian, New York, Schneider, 1077.
- Oriskany sandstone, Devonian, Missouri, Gallaher, 429.
- Oriskanian, Devonian, New York, Clarke, 201.
- Osgood bed, Silurian, Kentucky and Tennessee, Foerste, 408.
- Osgood beds, Silurian, Ohio, Prosser, 982.
- Oswayo beds, Carboniferous, New York, Clarke, 201.
- Oswayo beds, Carboniferous, New York, Glenn, 459.
- Oswayo formation, Devonian-Carboniferous, Pennsylvania, Fuller and Alden, 423, 424.
- Oswegan, Ontario, New York, Clarke, 201.
- Otselic shale and sandstone, Devonian, New York, Clarke, 201.
- Ouray limestones, Devonian, Colorado, Purington, 986.
- Oxmoor, Carboniferous, Alabama, Stevenson, 1182.
- Palisade conglomerate, Tertiary, Alaska, Collier, 229.
- Paloduro beds, Miocene, Tertiary, Texas, Gidley, 440.
- Panama conglomerate, Carboniferous, New York, Clarke, 201.
- Panhandle beds, Miocene, Tertiary, Texas, Gidley, 440.
- Parkville limestone, Carboniferous, Missouri, Gallaher, 429.
- Parsons limestone, Carboniferous, Kansas, Adams, 10.
- Pawhuska limestone, Carboniferous, Indian Territory, Adams, 10.
- Pawnee limestone, Carboniferous, Kansas, Adams, 10.
- Paxton schist, Massachusetts, Perry and Emerson, 971.
- Payette formation, Tertiary, Idaho, Lindgren and Drake, 806.
- Pelly gneisses, Alaska, Collier, 229.
- Pensauken, Quaternary, New York, Veatch, 1247.
- Pensauken formation, Pleistocene, New Jersey, Salisbury, 1053.
- Pennington shales, Carboniferous, Virginia, Stevenson, 1182.
- Peorian soil, Quaternary, Ohio, Prosser, 982.
- Peshastin formation, pre-Eocene, Washington, Smith, 1132.
- Pierre formation, Cretaceous, Nebraska, Barbour, 56.
- Pierre shale, Cretaceous, South Dakota, Todd, 1208, 1209, 1210.
- Pilarcitos sandstone, California, Lawson, 776.
- Pinal schists, pre-Cambrian, Arizona, Ramsome, 991, 994.
- Pinole tuffs, California, Lawson, 776.
- Pit formation, Triassic, California, Diller, 302.

Geologic formations described—Continued.

- Pittsburg red shale, Carboniferous, West Virginia, White, 1301.
- Pittsburg sandstone, Carboniferous, West Virginia, White, 1301.
- Pittsford shale, Ontario, New York, Clarke, 201.
- Pittsford shale, Silurian, New York, Hartnagel, 505.
- Placita marl, Quaternary, New Mexico, Reagan, 1003.
- Pocono, Lower Carboniferous, Appalachian region, Stevenson, 1182.
- Pocono sandstone, Carboniferous, Pennsylvania, Campbell, 164.
- Pogonip formation, Nevada, Spurr, 1155.
- Pokegama quartzite, included in Upper Huronian series, Algonkian, Minnesota, Leith, 786.
- Portage formation, Devonian, New York, Luther, 820.
- Portage formation, Devonian, New York, Clarke, 201.
- Portage sandstone, Devonian, New York, Clarke, 200.
- Portage sandstones, Devonian, New York, Luther, 820.
- Port Ewen limestone, Devonian, New York, Van Ingen and Clark, 1240.
- Port Ewen limestone, Devonian, New York, Clarke, 201.
- Port Ewen (Kingston) beds, Devonian, New York, Grabau, 465.
- Port Hudson clays, Recent, Texas, Hayes and Kennedy, 532.
- Portland shale, Devonian, New York, Clarke, 200.
- Portland shale, Devonian, New York, Clarke, 201.
- Potosi series, Colorado, Purington, 986.
- Potsdam sandstone, Cambrian, New York, Woodworth, 1351.
- Pottsville beds, Carboniferous, New York, Glenn, 459.
- Pottsville formation, Carboniferous, Ohio, Prosser, 982.
- Pottsville formation, Carboniferous, Pennsylvania, Fuller and Alden, 423.
- Pottsville conglomerate, Carboniferous, Pennsylvania and Ohio, Stevenson, 1182.
- Pottsville sandstone, Carboniferous, Pennsylvania, Campbell, 164.
- Pottsville series, Carboniferous, West Virginia, White, 1301.
- Poxino Island shale, Silurian, New Jersey, Weller, 1291.
- Prattsburg sandstone, Devonian, New York, Clarke, 201.
- Pre-Kansan drift, Quaternary, Iowa, Savage, 1071.
- Princeton limestone, Carboniferous, Kentucky, Ulrich and Smith, 1223.
- Prospect Mountain limestone and quartzite, Nevada, Spurr, 1155.
- Protean of Safford, Carboniferous, Tennessee, Stevenson, 1182.
- Puercó marls, Cretaceous, New Mexico, Reagan, 1003.

Geologic formations described—Continued.

- Pyburn limestone, subdivision of Linden bed, Devonian, Tennessee, Foerste, 408.
- Raleigh sandstone, Carboniferous, West Virginia, White, 1301.
- Rampart series, Devonian?, Alaska, Collier, 229.
- Randolph limestone, Arizona, Church, 185.
- Reagan sandstone, Cambrian, Indian Territory, Taff, 1192.
- Red Beds, Permian, New Mexico, Reagan, 1003.
- Red Beds, Texas, Oklahoma, Indian Territory and Kansas, Adams, 6.
- Redstone limestone, Carboniferous, West Virginia, White, 1301.
- Red Wall group, Upper and Lower, Arizona, Reagan, 1005.
- Red Wall limestone, Nevada, Spurr, 1155.
- Reynosa beds, Neocene, Texas, Dumble, 332.
- Reynosa limestone, Pliocene, Texas, Hayes and Kennedy, 532.
- Rhinestreet black shales, Devonian, New York, Luther, 820.
- Rhinestreet shale, Devonian, New York, Clarke, 201.
- Rhinestreet shales, Devonian, New York, Clarke, 200.
- Riceville shales, included in Chemung, Devonian, Pennsylvania, Stevenson, 1182.
- Richmond formation, Ordovician, Ohio, Prosser, 982.
- Richmond group, Cincinnati series, Ordovician, Foerste, 409.
- Richmond group, Ordovician, Ohio and Indiana, Nickles, 932.
- Richmond limestone, Cincinnati group, Ordovician, Tennessee, Foerste, 407.
- Richmond limestone, Ordovician, Tennessee, Foerste, 408.
- Rio Grande marls, Quaternary, New Mexico, Reagan, 1003.
- Ripley formation, Cretaceous, Alabama, Smith, 1126.
- Riversdale formation, Carboniferous, Canada, Ami, 26.
- Roan gneiss, Archean, North Carolina, Keith, 659.
- Roaring Creek sandstone (Upper Freeport sandstone), Carboniferous, West Virginia, White, 1301.
- Rock Creek beds, Pleistocene, Texas, Gidley, 440.
- Rockford goniatite limestone, Carboniferous, Indiana, Newsom, 929.
- Rondout beds, Silurian, New York, Van Ingen and Clark, 1240.
- Rondout formation, Silurian, New Jersey, Weller, 1291.
- Rondout formation, Silurian, New York, Hartnagel, 505.
- Rondout waterlime, Ontario, New York, Clarke, 201.
- Roslyn formation, Eocene, Washington, Smith, 1132.
- Ross limestone, subdivision of Linden bed, Devonian, Tennessee, Foerste, 408.

Geologic formations described—Continued.

- Roubidoux sandstone, Ordovician, Missouri, Gallaher, 429.
- Rove slate, included in Upper Huronian, Minnesota, Clements, 209.
- Ruin granite, pre-Cambrian, Arizona, Ransome, 991.
- Rysedorph conglomerate, Champlainie, New York, Clarke, 201.
- Sage Creek beds, Tertiary, Montana, Douglass, 317.
- Ste. Genevieve sandstone, Carboniferous, Missouri, Gallaher, 429.
- St. Joe limestone, Carboniferous, Missouri, Gallaher, 429.
- St. John terrane, Cambrian, Canada, Matthew, 858.
- St. Louis limestone, Carboniferous, Kentucky, Ulrich and Smith, 1223.
- St. Louis limestone, Carboniferous, Missouri, Gallaher, 429.
- St. Louis limestone, Carboniferous, Tennessee, Hayes and Ulrich, 533.
- St. Louis stage, Mississippian series, Iowa, Beyer and Young, 78.
- St. Peter sandstone, Ordovician, Missouri, Gallaher, 429.
- St. Stephens limestone, Tertiary, Alabama, Smith, 1126.
- St. Thomas sandstone, Ordovician, Missouri, Gallaher, 429.
- Salamanca conglomerate, Carboniferous, New York, Clarke, 201.
- Salamanca conglomerate lentil, included in Cattaraugus beds, Devonian, New York, Glenn, 459.
- Salina, Silurian, New York, Van Ingen and Clark, 1240.
- Salina beds, Ontario, New York, Clarke, 201.
- Salina formation, Ontario, Maryland, Schuchert, 1092.
- Salina formation, Silurian, New York, Sarle, 1070.
- Salina period, Silurian, New York, Schneider, 1077.
- Saltillo limestone, Cincinnati group, Ordovician, Tennessee, Foerste, 407.
- Saltsburg sandstone, member of Conemaugh formation, Carboniferous, Pennsylvania, Campbell, 164.
- Salzburg sandstone, Carboniferous, West Virginia, White, 1301.
- Saluda bed, Ordovician, Ohio, Prosser, 982.
- San Diego formation, Pliocene, California, Arnold, 38.
- Sandusky limestone, Devonian, Ohio, Prosser, 982.
- Sangamon soil, Quaternary, Ohio, Prosser, 982.
- San Juan breccias, Colorado, Purington, 986.
- Sankaty beds, Quaternary, New York, Veatch, 1247.
- San Miguel cherts, California, Lawson, 776.
- San Pablo, California, Lawson, 776.
- San Pedro series, Pleistocene, California, Arnold, 38.
- Santa Fé marl group, Tertiary, New Mexico, Johnson, 646.

Geologic formations described—Continued.

- Saratogian, Cambrie, New York, Clarke, 201.
 Saratogian, proposed for Upper Cambrian, Walcott, 1253.
 Sausalito cherts, California, Lawson, 776.
 Schultze granite, pre-Cambrian, Arizona, Ransome, 991.
 Secret Canyon shale, Nevada, Spurr, 1155.
 Sellersburg limestone, included in Hamilton, Devonian, Indiana, Newsom, 929.
 Selma chalk, Cretaceous, Alabama, Smith, 1126.
 Seneca group, Devonian, New York, Schneider, 1077.
 Senecan, Devonian, New York, Clarke, 201.
 Severy shales, Carboniferous, Kansas, Adams, 10.
 Sewickley limestone, Carboniferous, West Virginia, White, 1301.
 Sewickley sandstone, Carboniferous, West Virginia, White, 1301.
 Shady limestone, Cambrian, Tennessee, Keith, 659.
 Shaffers shale, Devonian, New York, Clarke, 201.
 Sharon conglomerate, Carboniferous, Ohio, Prosser, 982.
 Sharon conglomerate, member of Pottsville formation, Carboniferous, Pennsylvania, Fuller and Alden, 423, 424.
 Sharpsville sandstone, Carboniferous, Pennsylvania, Stevenson, 1182.
 Shasta-Chico, California, Lawson, 776.
 Shawangunk conglomerate, Silurian, New Jersey, Weller, 1291.
 Shell Bluff group, Tertiary, Florida, Dall, 261.
 Shenango sandstone, Carboniferous, Pennsylvania, Stevenson, 1182.
 Sherburne sandstone, Devonian, New York, Clarke, 201.
 Sheridan (Equus) beds, Pleistocene, Texas, Gidley, 440.
 Shinarump conglomerate, Utah, Huntington and Goldthwait, 623.
 Shumla sandstone, Devonian, New York, Clarke, 201.
 Silo sandstone, Cretaceous, Indian Territory, Taff, 1192.
 Silver Creek hydraulic limestone, included in Hamilton, Devonian, Indiana, Newsom, 929.
 Silver Creek shale, Devonian, New York, Clarke, 200.
 Silverton series, Colorado, Purington, 986.
 Simpson formation, Ordovician, Indian Territory, Taff, 1192.
 Sioux quartzite, Algonkian, South Dakota, Todd, 1208, 1209, 1210.
 Sioux quartzite, Algonkian, South Dakota, Todd and Hall, 1211.
 Skaneateles shale, Devonian, New York, Clarke, 201.
 Skunnemunk conglomerate, Devonian, New Jersey, Weller, 1291.
 Snowbank granite, Algonkian, Minnesota, Clements, 209.
 Snyder Creek shales, Devonian, Missouri, Gallaher, 429.

Geologic formations described—Continued.

- Solitude granite, pre-Cambrian, Arizona, Ransome, 991.
 Soudan formation, Archean, Minnesota, Clements, 209.
 Spearfish, South Dakota, Richardson, 1015.
 Spearfish sandstone, Triassic?, Wyoming, Smith, 1138.
 Springfield limestone, Silurian, Ohio, Prosser, 982.
 Squaw sandstone, Devonian, West Virginia, Stevenson, 1182.
 Stafford limestone, Devonian, New York, Talbot, 1193.
 Stanton limestone, Carboniferous, Kansas, Adams, 10.
 Star Peak formation, Nevada, Spurr, 1155.
 Stones River stage, Ordovician, Pennsylvania, Collie, 228.
 Stormville sandstone, Devonian, New Jersey, Weller, 1291.
 Styliola or Genundewa limestone, Devonian, New York, Luther, 820.
 Sunbury shale, Carboniferous, Ohio, Prosser, 982.
 Sundance formation, Jurassic, Wyoming, Smith, 1138.
 Swan Creek limestone, Cincinnati group, Ordovician, Tennessee, Foerste, 407.
 Swauk formation, Eocene, Washington, Smith, 1132.
 Sycamore limestone, Carboniferous, Indian Territory, Taff, 1192.
 Sylvan shale, Silurian, Indian Territory, Taff, 1192.
 Sylvania sandstone, Silurian, Ohio, Prosser, 982.
 Syracuse salt, Ontario, New York, Clarke, 201.
 Taconic, New York, Clarke, 201.
 Tahkandit series, Permian, Alaska, Collier, 229.
 Tampa limestone, or Orbitolite bed, Tertiary, Florida, Dall, 261.
 Tampa silex beds, Tertiary, Florida, Dall, 261.
 Teanaway basalt, Eocene, Washington, Smith, 1132.
 Tecumseh shales, Carboniferous, Kansas, Adams, 10.
 Tejon, California, Lawson, 776.
 Tichenor limestone, Devonian, New York, Clarke, 201.
 Tieton andesite, Quaternary, Washington, Smith, 1131.
 Tishomingo granite, pre-Cambrian igneous, Indian Territory, Taff, 1192.
 Tombstone beds, Carboniferous, Arizona, Church, 185.
 Tonto formation, Arizona, Reagan, 1005.
 Tonto shale and sandstone, Nevada, Spurr, 1155.
 Toughnut quartzite, Arizona, Church, 185.
 Toughnut series, Arizona, Blake, 86.
 Trenton limestone, Champlainic, New York, Clarke, 201.
 Trenton limestone, Ordovician, Missouri, Gallaher, 429.

Geologic formations described—Continued.

- Trenton limestone, Ordovician, New Jersey, Weller, 1291.
- Trenton limestone, Ordovician, Ohio, Bow-nocker, 117a.
- Trenton limestone, Ordovician, Ohio, Prosser, 982.
- Trenton stage, Ordovician, Pennsylvania, Collie, 228.
- Truckee formation, Nevada, Spurr, 1155.
- Trinity sand, Cretaceous, Indian Territory, Taff, 1192.
- Tullahoma formation, Carboniferous, Tennessee, Hayes and Ulrich, 533.
- Tully limestone, Devonian, New York, Claypole, 206.
- Tully limestone, Devonian, New York, Loomis, 809.
- Tully limestone, Devonian, New York, Schneider, 1077.
- Tully limestone, Devonian, New York, Clarke, 201.
- Tuscaloosa formation, Cretaceous, Alabama, Smith, 1126.
- Tuscumbia, Carboniferous, Alabama, Stevenson, 1182.
- Twelvemile beds, Tertiary, Alaska, Collier, 229.
- Tymochtee member (?), Silurian, Ohio, Prosser, 982.
- Uffington shale, Carboniferous, West Virginia, White, 1301.
- Ulfertian, Devonian, New York, Clarke, 201.
- Unadilla formation, Devonian, New York, Prosser, 983.
- Unicoi formation, Cambrian, North Carolina and Tennessee, Keith, 659.
- Union formation, Carboniferous, Canada, Ami, 26.
- Unkar formation, Nevada, Spurr, 1155.
- Utica formation, Ordovician, Canada, Nolan and Dixon, 934.
- Utica shale, Ordovician, Ohio, Prosser, 982.
- Utica stage, Ordovician, Pennsylvania, Collie, 228.
- Vancouver series, Triassic, Canada, Haycock, 521.
- Vancouver series, Triassic, Canada, Webster, 1273.
- Valdes series, Silurian (?), Alaska, Schrader, and Spence, 1084.
- Vanport limestone, Carboniferous, West Virginia, White, 1301.
- Venango, Devonian, Pennsylvania, Stevenson, 1182.
- Verkin, Upper and Lower, Permian, Utah, Huntington and Goldthwait, 623.
- Vernon shale, Ontario, New York, Clarke, 201.
- Vicksburg limestone, Tertiary, Florida, Dull, 261.
- Vilas shales, Carboniferous, Kansas, Adams, 10.
- Viola limestone, Ordovician, Indian Territory, Taff, 1192.
- Virginia slate, included in Upper Huronian series, Algonkian, Minnesota, Leith, 786.
- Waldron shaly clay, Silurian, Tennessee, Foerste, 408.

Geologic formations described—Continued.

- Wappinger limestone, Champlainic, New York, Clarke, 201.
- Wapsinicon stage, Devonian, Iowa, Calvin, 158.
- Warren bed, Cincinnati series, Ordovician, Foerste, 409.
- Warren limestone, Cincinnati group, Ordovician, Tennessee, Foerste, 407.
- Wasatch limestone, Nevada, Spurr, 1155.
- Washington limestone, Carboniferous, West Virginia, White, 1301.
- Washington stage, Carboniferous, West Virginia, White, 1301.
- Watauga shale, Cambrian, Tennessee, Keith, 659.
- Waverly, Carboniferous, Ohio and Kentucky, Stevenson, 1182.
- Waynesburg sandstone, Carboniferous, West Virginia, White, 1301.
- Waynesburg sandstone, member of Dunkard formation, Carboniferous, Pennsylvania, Campbell, 164.
- Waynesville beds, included in Richmond group, Ordovician, Ohio and Indiana, Nickles, 932.
- Weber conglomerate, Nevada and California, Spurr, 1155.
- Weissner quartzite, Cambrian, Georgia, Watson, 1271, 1272.
- Wellington shales, Carboniferous, Kansas, Adams, 10.
- Wenas basalt, Miocene, Tertiary, Washington, Smith, 1131.
- Westhill flags, Devonian, New York, Clarke, 201.
- West Hill sands, Devonian, New York, Clarke, 200.
- Weston limestone, Carboniferous, Missouri, Gallagher, 429.
- West Union limestone, Silurian, Ohio, Prosser, 982.
- Whalen group, Algonkian, Wyoming, Smith, 1138.
- White Pine shale, Nevada, Spurr, 1155.
- White River formation, Tertiary, Montana, Douglass, 317.
- Whitetail formation, Eocene?, Arizona, Ransome, 991.
- Whitewater beds, included in Richmond group, Ordovician, Ohio and Indiana, Nickles, 932.
- Wilbur limestone, Ontario, New York, Clarke, 201.
- Wilbur limestone, Silurian, New York, Hartnagel, 505.
- Wilbur limestone, Silurian, New York, Van Ingen and Clark, 1240.
- Willow Spring granite, Arizona, Ransome, 991.
- Wills Point clays, Eocene, Tertiary, Texas, Hayes and Kennedy, 532.
- Windy Gap limestone, Carboniferous, West Virginia, White, 1301.
- Winfield formation, Carboniferous, Kansas, Adams, 10.
- Wisconsin, Quaternary, New York, Veatch, 1247.

Geologic formations described—Continued.

- Wisconsin drift, Quaternary, Iowa, Macbride, 824.
 Wisconsin drift, Quaternary, Ohio, Prosser, 982.
 Wisconsin gravels, Quaternary, Iowa, Macbride, 824.
 Wiscoy shale, Devonian, New York, Clarke, 201.
 Wiscoy shales, Devonian, New York, Clarke, 200.
 Wiscoy shales, Devonian, New York, Luther, 820.
 Wolf Creek conglomerate, Carbonic, New York, Clarke, 201.
 Wolf Creek conglomerate lentil, included in Cattaraugus beds, Devonian, New York, Glenn, 459.
 Woodford chert, Devonian-Carboniferous, Indian Territory, Taff, 1192.
 Woods Bluff beds, included in Lignitic, Eocene, Tertiary, Georgia, Harris, 504.
 Worcester phyllite and mica-schist, Massachusetts, Perry and Emerson, 971.
 Worcester quartzite, Massachusetts, Perry and Emerson, 971.
 Wreford limestone, Carboniferous, Kansas, Adams, 10.
 Yakima basalt, Miocene, Tertiary, Washington, Smith, 1131, 1132.
 Yegua clays, Eocene, Texas, Dumble, 332.
 Yegua clays, Eocene, Tertiary, Texas, Hayes and Kennedy, 532.
 Yukon silts, Quaternary, Alaska, Collier, 229.

Geologic maps. ^a

- Alabama, Smith, 1126.
 Alaska, Collier, 229.
 Alaska, Mendenhall and Schrader, 880.
 Arizona, Ransome, 991.
 California, Spurr, 1163.
 Canada, Ellis, 364.
 Canada, Fletcher, 403.
 Canada, Leach, 779.
 Canada, McConnell, 830.
 Colorado, Purington, 986.
 Greenland, Böggild, 97.
 Idaho, Lindgren and Drake, 806.
 Indiana, Ashley, 40.
 Indiana, Newsom, 929.
 Indian Territory, Adams, 10.
 Indian Territory, Taff, 1192.
 Iowa, Beyer and Young, 78.
 Iowa, Calvin, 158, 159, 160.
 Iowa, Macbride, 824.
 Iowa, Savage, 1071.
 Iowa, Udden, 1220.
 Kansas, Adams, 10.
 Kansas, Bailey, 50.
 Kentucky, Tight, 1203.
 Louisiana, Hayes and Kennedy, 532.
 Massachusetts, Crosby, 249.
 Massachusetts, Perry and Emerson, 971.
 Massachusetts, Taylor, 1196.
 Minnesota, Clements, 209.
 Minnesota, Leith, 786.
 Montana, Rowe, 1039.

Geologic maps—Continued.

- Nebraska, Barbour, 56.
 Nebraska, Carmony, 171.
 Nebraska, Darton, 271, 272.
 Nevada, Spurr, 1155, 1158.
 New Mexico, Johnson, 646.
 New Mexico, Reagan, 1003.
 New Mexico, Yung and McCaffery, 1367.
 New York, Clarke, 200.
 New York, Cleland, 207.
 New York, Glenn, 459.
 New York, Grabau, 465.
 New York, Hartnagel, 505.
 New York, Luther, 820.
 New York, Van Ingen and Clark, 1240.
 North Carolina, Keith, 659.
 Ohio, Bownocker, 117.
 Ohio, Tight, 1203.
 Oregon, Diller, 301.
 Pennsylvania, Campbell, 164.
 Pennsylvania, Fuller and Alden, 423, 424.
 Pennsylvania, Ibseng, 628.
 South Dakota, Todd, 1208, 1209, 1210.
 South Dakota, Todd and Hall, 1211.
 Tennessee, Hayes and Ulrich, 533.
 Tennessee, Keith, 659.
 Texas, Adams, 6.
 Texas, Dumble, 332.
 Texas, Gidley, 440.
 Texas, Hayes and Kennedy, 532.
 United States (east of Mississippi River), Ries, 1024.
 Vermont, Daly, 265.
 Washington, Landes and Ruddy, 753.
 Washington, Smith, 1131, 1132.
 Washington, Willis, 1322.
 West Virginia, Tight, 1203.
 Wisconsin, Grant, 475.
 Wyoming, Kemp and Knight, 677.
 Wyoming, Smith, 1138.

Georgia.

- Clays of the United States, Ries, 1024.
 Dahlonega gold district, Eckel, 347.
 Dahlonega mining district, Eckel, 353.
 Eocene outcrops in central Georgia, Harris, 504.
 Fuller's earth deposits of Florida and Georgia, Vaughan, 1245.
 Gold and pyrite deposits of the Dahlonega district, Eckel, 348.
 Gold mining in McDuffie County, Fluker, 406.
 Iron ores of Cartersville district, Hayes and Eckel, 529.
 Manganese ore deposits of Georgia, Catlett, 179.
 Manganese ore deposits of Georgia, Watson, 1272.
 Manganese ores of the Cartersville district, Hayes, 524.
 Meteoric iron von Forsyth County, Cohen, 221.
 Ocher deposits of Bartow County, Watson, 1267.
 Ocher deposits in Cartersville district, Hayes and Eckel, 530.
 Sandstone dikes near Columbus, McCallie, 827.

^a Includes geologic maps of the whole or any part of the States mentioned.

Georgia—Continued.

- Soil survey of Cobb County, Burke and Marean, 143.
- Soil survey of the Covington area, Marean, 841.
- Vein structure at Reynolds mine, Collins, 234.

Glacial geology.*Appalachian region.*

- Elkland-Tioga folio, Fuller and Alden, 424.
- Gaines folio, Fuller and Alden, 423.
- Geological excursion in Pittsburg region, Grant, 476.

Atlantic coast region.

- Glacial conditions on Long Island, Buffet, 137.
- Glacial period on Long Island, Veatch, 1247.
- Geology of Long Island, Veatch, 1248.

Canada.

- Geologische Reiseskizzen aus Nordamerika, Felix, 391.
- Maemillan River, Yukon district, McConnell, 830.

Great Lakes region.

- Glacial features of Lower Michigan, Leverett, 793.
- Glacial lake Nicolet, Upham, 1229.
- Story of Niagara, Hitchcock, 578.
- Vermilion iron-bearing district of Minnesota, Clements, 209.

Great Plains region.

- Alexandria folio, Todd and Hall, 1211.
- Mitchell folio, Todd, 1210.
- Olivet folio, Todd, 1208.
- Parker folio, Todd, 1209.

Mississippi Valley region.

- Age of Lansing skeleton, Wright, 1357.
- Antiquity of fossil man of Lansing, Kansas, Upham, 1230.
- Dalles of the St. Croix, Berkey, 74.
- Fossil man of Lansing, Kansas, Williston, 1329.
- Geography and geology of Minnesota, Hall, 494.
- Geology of Chickasaw County, Iowa, Calvin, 159.
- Geology of Howard County, Iowa, Calvin, 158.
- Geology of Kossuth, Hancock, and Winnebago Counties, Macbride, 824.
- Geology of Mills and Fremont counties, Udden, 1220.
- Geology of Mitchell County, Iowa, Calvin, 160.
- Geology of Prairie Island, Upham, 1233.
- Geology of Tama County, Iowa, Savage, 1071.
- Keewatin and Laurentide sheets in Minnesota, Elftman, 361.
- Lansing skeleton, Owen, 955.
- Loess and the Lansing man, Shimek, 1105.
- Old channels of the Mississippi in Iowa, Leverett, 791.
- Physiography of Iowa, Calvin, 161.
- Pleistocene geology of the Coneannon farm, near Lansing, Kansas, Winchell, 1342.
- Toledo lobe of Iowan drift, Savage, 1072.
- Valley loess and fossil man of Lansing, Upham, 1226.
- Was man in America in the Glacial period, Winchell, 1344.

Glacial geology—Continued.*New England and New York.*

- Delta-plain at Andover, Massachusetts, Mills, 910.
- Delta plains of Nashua Valley, Crosby, 249.
- Drift fossils, Hollick, 594.
- Esker in western New York, Comstock, 235.
- Glacial conditions on Long Island, Buffet, 137.
- Glacial lakes, Hudson-Champlain and St. Lawrence, Upham, 1231.
- Glacial period on Long Island, Veatch, 1247.
- Glaciation of the Berkshire Hills, Taylor, 1197.
- Geology of Charles River estuary, Crosby, 248.
- Geology of Long Island, Veatch, 1248.
- Geology of Worcester, Massachusetts, Perry and Emerson, 971.
- Horseheads outlet of the Glacial lakes of central New York, Fuller, 422.
- Pre-Iroquois channels between Syracuse and Rome, Fairchild, 385.
- Pre-Kansan and Iowan deposits of Long Island, Fuller, 421.
- Recessional ice borders in Berkshire County, Massachusetts, Taylor, 1196.
- River terraces, and reversed drainage, Mills, 909.

Ohio Valley region.

- Gold and diamonds in Indiana, Blatchley, 92.
- Marl-loess of lower Wabash valley, Fuller and Clapp, 426.

Pacific coast region.

- Glacial stages in Klamath Mountains, Hershey, 553.
- Mounts Hood and Adams and their glaciers, Reid, 1011.
- Origin of transverse mountain valleys, Le Conte, 782.
- River terraces and glacial series in California, Hershey, 556.

Rocky Mountain region.

- Glaciation in Bighorn Mountains, Salisbury and Blackwelder, 1054.

General.

- Bog plant societies of North America, Trauseau, 1213.
- Criteria requisite for reference of relics to a glacial age, Chamberlin, 181.
- Glacial climate, Hopkins, 603.
- Glacial Lake Jean Nicolet, Upham, 1232.
- Glacial man, Wright, 1358.
- Glacial pothole in National Museum, Merrill, 891.
- Glacier cornices, Russell, 1051.
- Glaciers, Reid, 1010.
- How long ago was America peopled?, Upham, 1228.
- Length of post-Glacial time, Manson, 839.
- Muir Glacier, Andrews, 34.
- Past and future of Niagara Falls, Upham, 1162.
- Statics of a tidal glacier, Gilbert, 449.
- Summary of literature of North American Pleistocene geology, Leverett, 792.
- Variation of glaciers in North America, Reid, 1008, 1009.

Greenland.

- Jurassic fossils from east Greenland, Madsen, 836.
 Minerals from Julianehaab, Böggild, 96.
 Samples of sea floor along coast of Greenland, Böggild, 97.
 Struktur des grönländischen Inlandeises, Mügge, 922.
 Tertiary fauna at Kap Dalton, Ravn, 996.
 Translationsfähigkeit des Eises, Mügge, 923.

Guatemala.

- Asche des Vulkans Sta. Maria, Brauns, 120, 121.
 Ausbruch des Vulkans St. Maria, Sapper, 1055.
 Earthquake and volcanic eruption in Guatemala, Eisen, 357.
 Produkte des Ausbruchs am S. Maria, Bergeat, 73.
 Produkte Vulkan S. Maria, Bergeat, 72.
 Recent earthquakes, Rockstroh, 1034.
 Volcanic eruptions in Guatemala, Winterton, 1347.

Hawaiian Islands.

- Geology of Hawaiian Islands, Brauner, 119.
 Geology of Molokai, Lindgren, 804.
 Mohokea caldera on Hawaii, Hitchcock, 576.
 Observations on Hawaiian geology, Cross, 250.
 Water resources of Molokai, Lindgren, 799.

Hydrology.*Atlantic coast region.*

- Artesian wells, Woolman, 1354.
 Results of resurvey of Long Island, Fuller and Veatch, 427.

Canada.

- Artesian well in the Klondike, Tyrrell, 1219.

Great Plains region.

- Alexandria folio, Todd and Hall, 1211.
 Camp Clarke folio, Darton, 271.
 Jefferson County, Nebr., Carmony, 171.
 Mitchell folio, Todd, 1210.
 Olivet folio, Todd, 1208.
 Parker folio, Todd, 1209.
 Report of State geologist of Nebraska, Barbour, 56.
 Report on mineral waters, Bailey, 50.
 Scotts Bluff folio, Darton, 272.

Hawaiian Islands.

- Geology of Hawaiian Islands, Branner, 119.

Mississippi Valley region.

- Artesian wells in Iowa, Calvin, 157.
 Report on mineral waters, Bailey, 50.

New England and New York.

- Results of resurvey of Long Island, Fuller and Veatch, 427.

Ohio Valley region.

- Geology of Lower Carboniferous area of southern Indiana, Ashley, 40.
 Medicinal properties and uses of Indiana mineral waters, Hessler, 558.
 Mineral waters of Indiana, Blatchley, 90.
 Ohio natural gas fields, Bownocker, 117.

Pacific coast region.

- Ellensburg folio, Smith, 1131.

Rocky Mountain region.

- Artesian basins in Idaho and Oregon, Russell, 1049.
 Geology of Idaho and Oregon, Russell, 1048.

Hydrology—Continued.*Southwestern region.*

- Geological sketch of Hot Springs district, Weed, 1274.
 Geology of Fort Apache region, Reagan, 1005.
 Report of superintendent of Hot Springs Reservation, Eisele, 356.
 Silicic acid in waters of mountain streams, Headden, 536.
 Underground waters of Arizona, Skinner, 1119.

General.

- Analysis of waters from Hot Springs, Haywood, 534.
 Classification of mineral waters, Peale, 961.

Idaho.

- Artesian basins in Idaho and Oregon, Russell, 1049.
 Bellevue mining district, Lakes, 734.
 Current notes on physiography, Davis, 281.
 Geology of Idaho and Oregon, Russell, 1048.
 Gold production of North America, Lindgren, 802.
 Mining and milling in the Cœur d'Alene, Finlay, 399.
 Mining industry of the Cœur d'Alenes, Finlay, 398.
 Silver City folio, Lindgren and Drake, 806.
 Soil survey of the Boise area, Jensen and Olshausen, 641.
 Soil survey of the Lewiston area, Mesmer, 893.
 Thunder Mountain district, L'Hamec, 794.

Illinois.

- Carboniferous fishes from Central Western States, Eastman, 337.
 Carboniferous terrestrial arthropod fauna of Illinois, Melander, 875.
 Clays of the United States, Ries, 1024.
 Coal field of Indiana and Illinois, Fuller and Ashley, 425.
 Fluorspar and zinc mines of Kentucky, Harwood, 506.
 Plankton of the Illinois River, Kofoid, 702.
 Soil survey of Clay County, Coffey, 218.
 Soil survey of Clinton County, Bonsteel, 109.
 Soil survey of St. Clair County, Coffey, 217.
 Soil survey of Tazewell County, Bonsteel, 108.
 Stone industry in vicinity of Chicago, Alden, 13.

Indiana.

- Asphalt, oil, and gas in southwestern Indiana, Fuller, 420.
 Clays of the United States, Ries, 1024.
 Coal field of Indiana and Illinois, Fuller and Ashley, 425.
 Contribution to Indiana paleontology, Greene, 480-485.
 Fossil land shells of old forest bed, Billups, 79.
 Gold and diamonds in Indiana, Blatchley, 92.
 Lower Carboniferous area in Indiana, Hopkins, 604.
 Lower Carboniferous area of southern Indiana, Ashley, 40.
 Marl-loess of lower Wabash Valley, Fuller and Klapp, 426.
 Medicinal properties and uses of Indiana mineral waters, Hessler, 558.
 Mineral waters of Indiana, Blatchley, 90.

Indiana—Continued.

- Niagara domes of northern Indiana, Kindle, 689.
- Petroleum industry in Indiana, Blatchley, 91.
- Report of natural gas supervisor, Leach, 777, 778.
- Richmond group and its subdivisions, Nickles, 932.
- Richmond group of Cincinnati antiline, Foerste, 409.
- Ripple marks in Hudson limestone of Jefferson County, Culbertson, 253.
- Section across southern Indiana, Newsom, 929.
- Silurian and Devonian limestones of western Tennessee, Foerste, 408.
- Soil survey of Posey County, Marean, 843.
- Topographic features in lower Tippecanoe Valley, Breeze, 123.

Indian Territory.

- Arkansas-Indian Territory coal field, Bache, 47.
- Asphalt refining, Crane, 243.
- Carboniferous rocks of Kansas section, Adams, 10.
- Coal mining in Indian Territory, Crane, 245.
- Stratigraphic relations of Red Beds, Adams, 6.
- Tishomingo folio, Taff, 1192.

Iowa.

- Accretion of flood plains by sand bars, Simpson, 1114.
- Artesian wells in Iowa, Calvin, 157.
- Devonian fish fauna of Iowa, Eastman, 338.
- Foraminiferal ooze in Coal Measures, Udden, 1221.
- Geology of Chickasaw County, Calvin, 159.
- Geology of Howard County, Calvin, 158.
- Geology of Kossuth, Hancock, and Winnebago counties, Macbride, 824.
- Geology of Mills and Fremont counties, Udden, 1220.
- Geology of Mitchell County, Calvin, 160.
- Geology of Monroe County, Beyer and Young, 78.
- Geology of Tama County, Savage, 1071.
- Gypsum of central Iowa, Wilder, 1316.
- Old channels of the Mississippi in Iowa, Leverett, 791.
- Physiography of Iowa, Calvin, 161.
- Soil survey of the Dubuque area, Fippin, 400.
- Tests of lithographic limestone of Mitchell County, Hoen, 589.
- Toledo lobe of Iowan drift, Savage, 1072.

Jura.*Great Basin region.*

- Geology of Nevada, Spurr, 1155.
- Hurricane fault in southwestern Utah, Huntington and Goldthwait, 623.

Great Plains region.

- Hartville folio, Smith, 1138.
- Osteology of Haplocanthosaurus, Hatcher, 507.
- Triassic and Jurassic strata of the Black Hills, Hovey, 616.

Pacific coast region.

- Klamath Mountain section, Diller, 302.
- Marine sediments of eastern Oregon, Washburne, 1265.

Jura—Continued.*Southwestern region.*

- Geology of the Jemez-Albuquerque region, Reagan, 1003.

Kansas.

- Age of Lansing skeleton, Wright, 1357.
- Antiquity of fossil man of Lansing, Upham, 1230.
- Carboniferous fishes from central Western States, Eastman, 337.
- Carboniferous invertebrates, Beede, 64.
- Carboniferous rocks of Kansas section, Adams, 10.
- Coal fields of Kansas, Crane, 244.
- Cretaceous fishes, Williston, 1330.
- Current notes on physiography, Davis, 277.
- Economic geology of Iola and vicinity, Grimsley, 488.
- Fossil insects in Permian of Kansas, Sellards, 1097.
- Fossil man of Lansing, Pearson, 963.
- Fossil man of Lansing, Williston, 1329.
- Fossil plants from Upper Carboniferous and Permian formations of Kansas, White, 1296.
- Fossil plants of Onaga, Crevecoeur, 246.
- Ganoid- und Knochen-fische aus der Kreideformation von Kansas, Loomis, 808.
- Geology of Lyon County, Smith, 1123.
- Gold in Kansas, Lovewell, 813.
- Gold in Kansas shales, Lovewell, 812.
- Invertebrate fossils from Carboniferous section of Kansas, Girty, 456.
- Lansing skeleton, Owen, 955.
- Lead and zinc deposits of the Joplin district, Smith, 1139.
- Meteorites of Kansas, Farrington, 390.
- Origin of gypsum deposits, Sherwin, 1104.
- Ottawa gas wells, Yates, 1364.
- Physiographic divisions of Kansas, Adams, 4.
- Pleistocene geology of the Conaunon farm, near Lansing, Winchell, 1342.
- Report on mineral waters, Bailey, 50.
- Snout-fishes of Kansas, Hay, 519.
- Soil survey of the Wichita area, Lapham and Olshausen, 770.
- Stratigraphic relations of Red Beds, Adams, 6.
- Studies in the Mentor beds, Jones, 653.
- Teleosts of the Upper Cretaceous, Stewart, 1186.
- Valley loess and fossil man of Lansing, Upham, 1226.

Kentucky.

- Asphalt rock in Kentucky, Burk, 141.
- Barboursville oil field, McCallie, 828.
- Bath Furnace meteorite, Ward, 1259.
- Bath Furnace meteoric fall, Miller, 901.
- Clays of the United States, Ries, 1024.
- Drainage modifications in Ohio, West Virginia, and Kentucky, Tight, 1203.
- Fluorspar and zinc mines of Kentucky, Harwood, 506.
- Lead, zinc, and fluorspar deposits of western Kentucky, Ulrich and Smith, 1223.
- Lower Carboniferous of Appalachian basin, Stevenson, 1182.
- Meteorite from Mount Vernon, Merrill, 888.
- New meteorite from Kentucky, Miller, 900.

Kentucky—Continued.

- Report on lands leased for oil and gas near Cannel City, Lane, 760.
- Richmond group of Cincinnati anticline, Foerste, 409.
- Silurian and Devonian limestones of western Tennessee, Foerste, 408.
- Soil survey of Union County, Marean, 842.

Louisiana.

- Eocene Eulimidae, Casey, 177.
- Oil fields of Texas-Louisiana Gulf coastal plain, Hayes, 526.
- Oil fields of Texas-Louisiana Gulf coastal plain, Hayes and Kennedy, 532.
- Soil survey of the Lake Charles area, Heileman and Mesmer, 541.

Maine.

- Ames Knob, North Haven, Willis, 1323.
- Andover meteorite, Ward, 1260.
- Clays of the United States, Ries, 1024.

Maryland.

- Addition to coral fauna of Aquia Eocene formation of Maryland, Vaughan, 1241.
- Clays of the United States, Ries, 1024.
- Copper deposits of Appalachian States, Weed, 1278.
- Correlation of the Potomac formation, Ward, 1261.
- Devonic and Ontario formations of Maryland, Schuchert, 1092.
- Lower Carboniferous of Appalachian basin, Stevenson, 1182.
- Physiographic features of Maryland, Abbe, 1.
- Soil survey of Calvert County, Bonsteel and Burke, 103.
- Soil survey of Cecil County, Dorsey and Bonsteel, 313.
- Soil survey of Harford County, Smith and Martin, 1143.
- Soil survey of Kent County, Bonsteel, 101.
- Soil survey of Prince George County, Bonsteel, 106.
- Soil survey of St. Mary County, Bonsteel, 102.

Massachusetts.

- Changes of level at Cape Ann, Tarr, 1195.
- Clays of the United States, Ries, 1024.
- Cuttyhunk Island, Gulliver, 490.
- Delta plain at Andover, Mills, 910.
- Delta plains of the Nashua Valley, Crosby, 249.
- Elevated beaches of Cape Ann, Woodworth, 1353.
- Erosion by flying sand on beaches of Cape Cod, Julien, 657.
- Geologic features within the 8,000-acre grant, Sheldon and Sheldon, 1101.
- Geology of Charles River estuary, Crosby, 248.
- Geology of Worcester, Perry and Emerson, 971.
- Glacial cirques and rock terraces on Mount Toby, Emerson, 369.
- Glaciation of the Berkshire Hills, Taylor, 1197.
- Mineralogical notes, Warren, 1264.
- Recessional ice borders in Berkshire County, Taylor, 1196.
- Soil survey in the Connecticut Valley, Dorsey and Bonsteel, 310.

Mexico.

- Arizpe meteorite, Wuensch, 1363.
- Cananea ore deposits, Weed, 1284.
- Cananea, revisited, Hill, 571.
- Coal mines at Las Esperanzas, Ries, 1027.
- Cobault au Mexique, Caballero, 150.
- Drainage of valley of Mexico, Emmons, 377.
- Eruptions du Volcan de Colima, Ordoñez, 944.
- Eruptions of Colima, Arceola, 39.
- Genesis de los yacimientos mercuriales de Palomas, Villarello, 1249.
- Geology of nepheline syenite area at San José, Tamaulipas, Finlay, 396.
- Geology of San Pedro district, Finlay, 394.
- Geology of the Cananeas, Mathez, 853.
- Gold production of North America, Lindgren, 802.
- In San Cristobal gefallene Asche, Schottler, 1083.
- Mines of Santa Eulalia, Aiken, 12.
- Nephelite syenite area of San José, Finlay and Kemp, 397.
- Occurrence of selenium with pyrite, Pearce, 962.
- Ore deposits of Cananea, Austin, 44.
- Ore deposits of Cananea, Hill, 570.
- Ore deposits of La Cananea, Steel, 1173.
- Sahcab de Yucatan, Ordoñez, 942.
- Sain Alto tin deposits, Nevius, 928.
- Santa Eulalia district, Hill, 569.
- Santa Eulalia mines, Lakes, 743.
- Santa Eulalia mining district, Argall, 36.
- Santa Eulalia ore deposits, Argall, 37.
- Section across Sierra Madre Occidental, Hewett, 561.
- Silver-bearing veins of Mexico, Halse, 497.
- Trip to Chihuahua, Lakes, 740.
- Volcan de Tacana, Böse, 114.
- Volcanes de Zacapu, Ordoñez, 943.
- Vulkanische Asche, Schmidt, 1076.
- Xinantacatl ou volcan Nevado de Toluca, Ordoñez, 941.
- Yaqui River country of Sonora, Bancroft, 55.

Michigan.

- Clays of the United States, Ries, 1024.
- Copper mining in Upper Michigan, Jackson, 631.
- Delta of St. Clair River, Cole, 223.
- Economic geology of Michigan, Lane, 763.
- Glacial features of Lower Michigan, Leverett, 793.
- Limestone regions of Michigan, Grabau, 469.
- Localities and mills manufacturing cement, Lane, 757.
- Marl and the manufacture of Portland cement, Hale, 492.
- Marls and clays in Michigan, Fall, 386.
- Origin of Michigan boglimes, Lane, 756.
- Paleozoic coral reefs, Grabau, 466.
- Platygonus compressus Le Conte, Wagner, 1252.
- Recent work of geological survey, Lane, 755.
- Reed City meteorite, Preston, 979.
- Report of Michigan geological survey, Lane, 754.
- Soil survey of Allegan County, Fippin and Rice, 402.

Michigan—Continued.

- Sub-Carboniferous limestone exposure at Grand Rapids, Whittemore, 1312.
- Traverse group of Michigan, Grabau, 471.
- Variation of geothermal gradient, Lane, 764.
- Shells of marls, Walker, 1257.

Mineralogy.

- Amphibole hudsonite, Weidman, 1290.
- Andover meteorite, Ward, 1260.
- Apatite crystals, Antwerp, New York, Knight, 694.
- Arizpe meteorite, Wuensch, 1363.
- Bath Furnace meteorite fall, Miller, 901.
- Bath Furnace meteorite, Ward, 1259.
- Bismuth and bismite from Pala, California, Kunz, 709.
- Californite, a new ornamental stone, Kunz, 708.
- Canadian amphiboles, Harrington, 501.
- Catalogue of meteorites, Farrington, 388.
- Chemical composition of axinite, Ford, 415.
- Chrysocolla: A remarkable case of hydration, Palmer, 956.
- Colorado: Report of State Bureau of Mines, Lee, 783.
- Determination of feldspars in thin section, Spurr, 1156.
- Development of pseudomorphs, Patton, 960.
- Famous gold nuggets of the world, Hurley, 624.
- Formula of bornite, Harrington, 502.
- Geology of Worcester, Massachusetts, Perry and Emerson, 971.
- Highway construction in Wisconsin, Buckley, 136.
- Identity of palacheite and botryogen, Eakle, 334.
- Jade, Easter, 336.
- Kunzite, Baskerville, 59.
- Lead and zinc deposits of southwestern Wisconsin, Grant, 475.
- Lead, zinc, and fluor spar deposits of western Kentucky, Ulrich and Smith, 1223.
- Lilac-colored transparent spodumene, Kunz, 707.
- Mercury minerals from Terlingua, Texas, Moses, 919.
- Meteoriten von Cincinnati, Cohen, 222.
- Meteoriten von Forsyth County, Georgia, Cohen, 221.
- Meteoriten von Locust Grove, Nord-Carolina, Cohen, 220.
- Meteorite iron from Augusta County, Virginia, Campbell and Howe, 163.
- Meteorite from Algoma, Hobbs, 581.
- Meteorite from Mount Vernon, Kentucky, Merrill, 888.
- Meteorites of Kansas, Farrington, 390.
- Mineral analyses, Clarke, 191.
- Mineralogical notes, Headden, 535.
- Mineralogical notes, Warren, 1264.
- Minerals and mineral localities of Texas, Simonds, 1113.
- Minerals from Julianehaab, Greenland, Böggild, 96.
- Minerals from Leona Heights, Alameda County, California, Schaller, 1073.

Mineralogy—Continued.

- Minerals of Joplin district, Rogers, 1035.
- Native arsenic from Montreal, Evans, 381.
- New forms of sperrylite, Goldschmidt and Nicol, 460.
- New lilac-colored spodumene, Kunz, 710.
- New meteorite from Kentucky, Miller, 900.
- New York mineral localities, Whitlock, 1311.
- Occurrence of Texas mercury minerals, Hill, 567.
- Oscuro Mountain meteorite, Hills, 575.
- Palacheite, Eakle, 335.
- Phosphorus in Saline Township meteorite, Farrington, 389.
- Platinum in nickel-copper ores from Sudbury, Dickson, 298.
- Rare metals from Rambler mine, Wyoming, Read, 1000.
- Recent mineralogical literature, Moses and Luquer, 920.
- Red City meteorite, Preston, 979.
- Relations of tetrahedral combinations to crystalline form, Blake, 82.
- Report of State geologist of Nebraska, Barbour, 56.
- Rickardite, Ford, 414.
- Road-making materials of Pennsylvania, Hilseng, 628.
- Spodumene from San Diego County, Schaller, 1074.
- Synthesis of chalcocite and its genesis at Butte, Montana, Winchell, 1339.
- Tables of minerals, Penfield, 965.
- Titaniferous pyroxene, Winchell, 1337.
- Ward-Cooley collection of meteorites, Ward, 1258.

Minerals described.

- Actinolite, Perry and Emerson, 971.
- Actinolite, Simonds, 1113.
- Adularia, Simonds, 1113.
- Agate, Barbour, 56.
- Agate, Simonds, 1113.
- Alamandite, Simonds, 1113.
- Albite, Simonds, 1113.
- Allanite, Perry and Emerson, 971.
- Allanite, Simonds, 1113.
- Amethyst, Simonds, 1113.
- Amphibole, Buckley, 136.
- Amphibole, Harrington, 501.
- Amphibole, Hilseng, 628.
- Amphibole, Simonds, 1113.
- Andradite, Simonds, 1113.
- Anglesite, Grant, 475.
- Ankerite, Simonds, 1113.
- Anthophyllite, Warren, 1264.
- Apatite, Knight, 694.
- Apatite, Simonds, 1113.
- Aragonite, Simonds, 1113.
- Argentite, Simonds, 1113.
- Arsenic, Evans, 381.
- Arsenic, Warren, 1264.
- Asbestos, Simonds, 1113.
- Asphaltum, Simonds, 1113.
- Atacamite, Simonds, 1113.
- Aventurine, Simonds, 1113.
- Axinite, Ford, 415.
- Azurite, Simonds, 1113.

Minerals described—Continued.

Barite, Barbour, 56.
 Barite, Grant, 475.
 Barite, Simonds, 1113.
 Barite, Ulrich and Smith, 1223.
 Beauxite, Simonds, 1113.
 Beryl, Simonds, 1113.
 Biotite, Simonds, 1113.
 Bismite, Kunz, 709.
 Bismuth, Kunz, 709.
 Boothite, Schaller, 1073.
 Bornite, Harrington, 502.
 Bornite, Simonds, 1113.
 Botryogen, Eakle, 334.
 Braunite, Simonds, 1113.
 Bromyrite, Simonds, 1113.
 Bronzite, Simonds, 1113.
 Calamine, Grant, 475.
 Calamine, Simonds, 1113.
 Calcite, Barbour, 50.
 Calcite, Buckley, 136.
 Calcite, Grant, 475.
 Calcite, Ihlseng, 628.
 Calcite, Patton, 960.
 Calcite, Perry and Emerson, 971.
 Calcite, Simonds, 1113.
 Calcite, Ulrich and Smith, 1223.
 Californite (Vesuvianite), Kunz, 708.
 Calomel, Simonds, 1113.
 Carnelian, Simonds, 1113.
 Cassiterite, Simonds, 1113.
 Celestite, Barbour, 56.
 Celestite, Simonds, 1113.
 Cerargyrite, Simonds, 1113.
 Cerussite, Grant, 475.
 Cerussite, Warren, 1264.
 Cerussite, Simonds, 1113.
 Chabazite, Perry and Emerson, 97.
 Chalcantite, Schaller, 1073.
 Chalcedony, Simonds, 1113.
 Chalcocite, Simonds, 1113.
 Chalcocite, Winchell, 1339.
 Chalcopyrite, Grant, 475.
 Chalcopyrite, Simonds, 1113.
 Chert, Simonds, 1113.
 Chlorite, Buckley, 136.
 Chlorite, Simonds, 1113.
 Chloropal, Simonds, 1113.
 Chrysocolla, Palmer, 956.
 Chrysocolla, Simonds, 1113.
 Cinnabar, Simonds, 1113.
 Coal, Simonds, 1113.
 Columbite, Simonds, 1113.
 Copiapite, Schaller, 1073.
 Copper, native, Simonds, 1113.
 Crednerite, Simonds, 1113.
 Cuprite, Simonds, 1113.
 Cuprodescliozite, Headen, 535.
 Cyanotrichite, Simonds, 1113.
 Cyprine, Simonds, 1113.
 Cyrtolite, Simonds, 1113.
 Dolomite, Buckley, 136.
 Dolomite, Grant, 475.
 Dolomite, Patton, 960.
 Dolomite, Simonds, 1113.
 Eglestonite, Moses, 919.
 Enstatite, Simonds, 1113.

Minerals described—Continued.

Epidote, Perry and Emerson, 971.
 Epidote, Simonds, 1113.
 Epsomite, Schaller, 1073.
 Epsomite, Simonds, 1113.
 Erikite, Bøggild, 96.
 Fayalite, Warren, 1264.
 Fassatite, Simonds, 1113.
 Feldspar, Buckley, 136.
 Feldspar, Ihlseng, 628.
 Feldspar, Spurr, 1156.
 Fergusonite, Simonds, 1113.
 Fibrolite, Perry and Emerson, 971.
 Fibrolite, Simonds, 1113.
 Flint, Simonds, 1113.
 Fluorite, Simonds, 1113.
 Fluorite, Ulrich and Smith, 1223.
 Franklinite, Simonds, 1113.
 Gadolinite, Simonds, 1113.
 Galena, Simonds, 1113.
 Galena, Ulrich and Smith, 1223.
 Galenite, Grant, 475.
 Gibbsite, Simonds, 1113.
 Glauconite, Simonds, 1113.
 Goethite, Simonds, 1113.
 Gold, Hurley, 624.
 Gold, Simonds, 1113.
 Grahamite, Simonds, 1113.
 Graphite, Perry and Emerson, 971.
 Graphite, Simonds, 1113.
 Grossularite, Simonds, 1113.
 Gummite, Simonds, 1113.
 Gypsum, Barbour, 56.
 Gypsum, Simonds, 1113.
 Hematite, Buckley, 136.
 Hematite, Simonds, 1113.
 Hiddenite, Schaller, 1074.
 Hudsonite, Weidman, 1290.
 Hyalite, Simonds, 1113.
 Hydrozincite, Grant, 475.
 Hypersthene, Simonds, 1113.
 Ilmenite, Simonds, 1113.
 Jadeite, Easter, 336.
 Jasper, Simonds, 1113.
 Jefferisite, Simonds, 1113.
 Kaolin, Ihlseng, 628.
 Kaolinite, Simonds, 1113.
 Keilhauite, Simonds, 1113.
 Kerolite, Simonds, 1113.
 Kunzite, Baskerville, 59.
 Labradorite, Simonds, 1113.
 Lampadite, Simonds, 1113.
 Lignite, Simonds, 1113.
 Limnite, Simonds, 1113.
 Limonite, Barbour, 56.
 Limonite, Buckley, 136.
 Limonite, Simonds, 1113.
 Lithomarge, Simonds, 1113.
 Mackintoshite, Simonds, 1113.
 Magnesite, Simonds, 1113.
 Magnetite, Buckley, 136.
 Magnetite, Simonds, 1113.
 Malachite, Simonds, 1113.
 Marcasite, Grant, 475.
 Marcasite, Ihlseng, 628.
 Margarite, Simonds, 1113.
 Margarodite, Simonds, 1113.

Minerals described—Continued.

Martite, Simonds, 1113.
 Massicot, Simonds, 1113.
 Melanconite, Simonds, 1113.
 Melanite, Simonds, 1113.
 Melanterite, Schaller, 1073.
 Melanterite, Simonds, 1113.
 Mercury, Simonds, 1113.
 Metacinnabarite, Simonds, 1113.
 Metagadolinite, Simonds, 1113.
 Meteoric iron, Simonds, 1113.
 Meteorite, Barbour, 56.
 Meteorite, Campbell and Howe, 163.
 Meteorite, Cohen, 220, 221, 222.
 Meteorite, Farrington, 388, 389, 390.
 Meteorite, Hills, 575.
 Meteorite, Hobbs, 581.
 Meteorite, Merrill, 888.
 Meteorite, Miller, 900, 901.
 Meteorite, Preston, 979.
 Meteorite, Ward, 1258, 1259, 1260.
 Meteorite, Wuensch, 1363.
 Mica, Buckley, 136.
 Mica, Ihlseng, 628.
 Microcline, Simonds, 1113.
 Molybdenite, Simonds, 1113.
 Montroydite, Moses, 919.
 Muscovite, Simonds, 1113.
 Nephrite, Easter, 336.
 Nickel, Simonds, 1113.
 Nitre, Simonds, 1113.
 Nivenite, Simonds, 1113.
 Oehre, Simonds, 1113.
 Oligoclase, Simonds, 1113.
 Olivine, Buckley, 136.
 Onyx, Simonds, 1113.
 Opal, Simonds, 1113.
 Orthoclase, Simonds, 1113.
 Palacheite, Eakle, 334, 335.
 Penninite, Simonds, 1113.
 Petroleum, Simonds, 1113.
 Phlogopite, Simonds, 1113.
 Phosgenite, Warren, 1264.
 Pigeonite, Winchell, 1337.
 Pisanite, Schaller, 1073.
 Pitch blende, Simonds, 1113.
 Platinum, Dickson, 298.
 Platinum, Simonds, 1113.
 Prehnite, Perry and Emerson, 971.
 Pribramite, Simonds, 1113.
 Prochlorite, Perry and Emerson, 971.
 Pseudomalachite, Simonds, 1113.
 Psilomelane, Simonds, 1113.
 Pyrite, Barbour, 56.
 Pyrite, Buckley, 136.
 Pyrite, Grant, 475.
 Pyrite, Ihlseng, 628.
 Pyrite, Schaller, 1073.
 Pyrite, Simonds, 1113.
 Pyroaurite, Simonds, 1113.
 Pyrolusite, Barbour, 56.
 Pyrolusite, Simonds, 1113.
 Pyroxene, Buckley, 136.
 Pyroxene, Ihlseng, 628.
 Pyroxene, Simonds, 1113.
 Pyroxene, Winchell, 1337.
 Pyrrhotite, Perry and Emerson, 971.
 Quartz, Buckley, 136.

Minerals described—Continued.

Quartz, Grant, 475.
 Quartz, Ihlseng, 628.
 Quartz, Simonds, 1113.
 Rickardite, Ford, 414.
 Rowlandite, Simonds, 1113.
 Rubrite, Eakle, 335.
 Sagenitic quartz, Simonds, 1113.
 Salt, rock, Simonds, 1113.
 Samarskite, Simonds, 1113.
 Sardonyx, Simonds, 1113.
 Schizolite, Böggild, 96.
 Selenite, Grant, 475.
 Serpentine, Simonds, 1113.
 Siderite, Simonds, 1113.
 Silver, native, Simonds, 1113.
 Smithsonite, Grant, 475.
 Sperryllite, Goldschmidt and Nicol, 460.
 Spessartite, Simonds, 1113.
 Sphalerite, Grant, 475.
 Sphalerite, Simonds, 1113.
 Sphalerite, Ulrich and Smith, 1223.
 Spodumene, Baskerville, 59.
 Spodumene, Kunz, 707, 710.
 Spodumene, Schaller, 1074.
 Stilbite, Perry and Emerson, 971.
 Stromeyerite, Simonds, 1113.
 Strontianite, Simonds, 1113.
 Sulphur, Grant, 475.
 Sulphur, native, Simonds, 1113.
 Tale, Simonds, 1113.
 Tellurite, Headden, 535.
 Tellurium, Headden, 535.
 Tengerite, Simonds, 1113.
 Tephroite, Simonds, 1113.
 Terlinguaite, Moses, 919.
 Tetrahedrite, Simonds, 1113.
 Thorogummite, Simonds, 1113.
 Titanite, Simonds, 1113.
 Topaz, Simonds, 1113.
 Torbernite, Simonds, 1113.
 Tourmaline, Simonds, 1113.
 Travertine, Simonds, 1113.
 Tremolite, Simonds, 1113.
 Turgite, Simonds, 1113.
 Turquoise, Simonds, 1113.
 Uralite?, Simonds, 1113.
 Uralorthite, Simonds, 1113.
 Uraninite, Simonds, 1113.
 Uranium, Simonds, 1113.
 Uranoehre, Simonds, 1113.
 Vermiculite, Perry and Emerson, 971.
 Vermiculite, Simonds, 1113.
 Vesuvianite, Simonds, 1113.
 Wad, Simonds, 1113.
 Wochefinite, Simonds, 1113.
 Wolframite, Simonds, 1113.
 Wollastonite, Simonds, 1113.
 Wulfenite, Simonds, 1113.
 Yttrialite, Simonds, 1113.
 Zircon, Perry and Emerson, 971.
 Zoisite, Simonds, 1113.

Minnesota.

Dalles of the St. Croix, Berkey, 74.
 Geologic work in Lake Superior iron district,
 Leith, 787.
 Geography and geology of Minnesota, Hall,
 494.

Minnesota—Continued.

- Geology of Minnesota, Hall, 495.
 Geology of Prairie Island, Upham, 1233.
 Highland range in Minnesota, Elftman, 360.
 Iron ores of Mesabi and Gogebic ranges, Leith, 790.
 Keewatin and Laurentide ice sheets in Minnesota, Elftman, 361.
 Mesabi iron range, Winchell, 1340.
 Mesabi iron-bearing district, Leith, 786.
 Results of the late Minnesota geological survey, Winchell, 1337.
 Vermillion district of Minnesota, Clements, 211.
 Vermillion iron-bearing district of Minnesota, Clements, 209.

Mississippi.

- Clays of the United States, Ries, 1024.
 New species of Tertiary fossils, Aldrich, 16.
 Soil survey of the Smedes area, Smith and Carter, 1146.
 Soil survey of the Yazoo area, Bonsteel, 107.
 Stoneware and brick clays, Eckel, 350.

Missouri.

- Bituminous and asphalt rocks, Broadhead, 130.
 Geology of Missouri, Gallaher, 429.
 Joplin zinc district, Steele, 1174.
 Lead and zinc deposits of the Joplin district, Smith, 1139.
 Minerals of Joplin district, Rogers, 1035.
 Sandstones of Ozark region, Marbut, 840.
 Soil survey of Howell County, Fippin and Burgess, 401.

Montana.

- Chalcoite at Butte, Winchell, 1339.
 Current notes on physiography, Davis, 279.
 Fauna of Titanotherium beds, Matthew, 863.
 Fresh-water faunule from Cretaceous of Montana, Stanton, 1166.
 Geological observations along northern boundary of Montana, Finlay, 395.
 Gold mines of Marysville district, Weed, 1275.
 Gold nugget from Montana, Pearce, 962.
 Gold production of North America, Lindgren, 802.
 Igneous rocks and their segregation, Winchell, 1338.
 Mineral deposits of Bitterroot Range and Clearwater Mountains, Lindgren, 797.
 Montana coal fields, Rowe, 1039.
 Ore deposits at Butte, Weed, 1277.
 Origin of North Dakota lignites, Wilder, 1317.
 Physiography of Flathead Lake region, Elrod, 368.
 Soil survey of the Billings area, Jensen and Neill, 642.
 Stratigraphic position of Judith River beds, Hatcher and Stanton, 513.
 Synthesis of chalcocite and its genesis at Butte, Winchell, 1339.
 Vertebrates from the Montana Tertiary, Douglass, 317.
 Volcanic ash beds of Montana, Rowe, 1038.

Nebraska.

- An old Platte channel, Condra, 240.
 Camp Clarke folio, Darton, 271.

Nebraska—Continued.

- Carboniferous fishes from central western States, Eastman, 337.
 Coal Measure bryozoa of Nebraska, Condra, 238.
 Ground sloth from Nebraska Pleistocene, Brown, 134.
 Jefferson County, Carmony, 171.
 Report of State geologist, Barbour, 56.
 Rhombopora lepidodendroides Meek, Condra, 239.
 Scotts Bluff folio, Darton, 272.

Nevada.

- Contact quaquaversal, Purington, 985.
 Geological reconnaissance of region of upper main Walker River, Smith, 1124.
 Geology of Nevada, Spurr, 1155.
 Gold production of North America, Lindgren, 802.
 Gypsum deposits of Nevada, Louderbach, 810.
 Hydro-thermal activity in veins at Wedekind, Morris, 918.
 Metallic sulphides from Steamboat Springs, Lindgren, 805.
 Ore deposits of Contact, Bailey, 51.
 Ore deposits of Tonopah, Spurr, 1157, 1158, 1160.
 Structural section of a Basin range, Louderbach, 811.
 Tungsten ore in eastern Nevada, Weeks, 1287.

Newfoundland.

- Geological exploration in district of White Bay, Howley, 620.
 Variolitic pillow-lava, Daly, 267.

New Hampshire.

- Geology of Mount Kearsarge, Perry, 970.

New Jersey.

- Acidaspis from a boulder of Marcellus shale, Hitchcock, 577.
 Administrative report of State geologist, Kümmel, 704.
 Artesian wells, Woolman, 1354.
 Clays of the United States, Ries, 1024.
 Columbia University Geological Department, Shimer, 1110.
 Copper deposits of Appalachian States, Weed, 1278.
 Copper deposits of New Jersey, Weed, 1279.
 Flora of the Matawan formation, Berry, 76.
 Iron and zinc mines, Kümmel, 705.
 Paleozoic faunas, Weller, 1291.
 Plants from the Matawan formation, Berry, 75.
 Pleistocene mollusks of White Pond, Baker, 54.
 Soil survey of the Trenton area, Burke and Wilder, 144.
 Soil survey of the Salem area, Bonsteel and Taylor, 105.
 Summary and index of reports of New Jersey Geological Survey, Kümmel, 706.
 Surface formations in southern New Jersey, Salisbury, 1053.
 Zinc and manganese deposits of Franklin Furnace, Wolff, 1348.

New Mexico.

- Age of lavas of plateau region, Reagan, 1004.
 Block mountains in New Mexico, Johnson, 649.

New Mexico—Continued.

- Canyons of northeastern New Mexico, Lee, 784.
- Copper deposits of Sierra Oscura, Turner, 1215.
- Ephemeral lakes in arid regions, Keyes, 681.
- Geological structure of New Mexican bolson plains, Keyes, 680.
- Geology of Apache Canyon placers, Keyes, 684.
- Geology of Cerillos Hills, Johnson, 648.
- Geology of Saline basins of central New Mexico, Johnson, 650.
- Geology of the Cerrillos Hills, Johnson, 646.
- Geology of the Jemez-Albuquerque region, Reagan, 1003.
- Gold production of North America, Lindgren, 802.
- Jemez coal fields, Reagan, 1006.
- Landslide in Chaco Cañon, Dodge, 308.
- New fossil *Ashmunella*, Cockerell, 214.
- New Mexico copper deposits, Austin, 43.
- Ore deposits of San Pedro district, Yung and McCaffery, 1367.
- Osuro Mountain meteorite, Hills, 575.
- Physiography of southern Arizona and New Mexico, Fairbanks, 383.
- Remarkable silver pipe, Keyes, 683.
- Soil survey in the Pecos Valley, Means and Gardner, 872.

New York.

- Apatite crystals, Antwerp, New York, Knight, 694.
- Calcareous formation of Mohawk Valley, Cleland, 208.
- Cambrie *Dictyonema* fauna, Ruedemann, 1042.
- Cambro-Ordovician outlier at Wellstown, Kemp, 669.
- Classification of New York geologic formations, Clarke, 201.
- Clays of the United States, Ries, 1024.
- Cobleskill limestone of New York, Hartnagel, 505.
- Cretaceous beds of Long Island, Hollick, 593.
- Devonian and Carbonic formations of southwestern New York, Glenn, 459.
- Devonian worms, Clarke, 199.
- Drift fossils, Hollick, 594.
- Dwarf fauna of Tully limestone, Loomis, 809.
- Eruptive dikes near Ithaca, Schneider, 1082.
- Esker in western New York, Comstock, 235.
- Eurypterid fauna from the Salina, Sarle, 1070.
- Fauna of Agoniatite limestone of Onondaga County, Wilson, 1335.
- Fauna of Stafford limestone, Talbot, 1193.
- Faunas of the Trenton, Raymond, 997.
- Fossil faunas of Olean quadrangle, Butts, 148.
- Gaines folio, Fuller and Alden, 423.
- Genesis of amphibole schists and serpentines of Manhattan Island, Julien, 656.
- Geographic development of northern Pennsylvania and southern New York, Campbell, 165.
- Geological notes on the neighborhood of Buffalo, Martin, 846.
- Geology of eastern New York, Prosser, 983.
- Geology of Long Island, Veatch, 1248.

New York—Continued.

- Geology of Onondaga County, Schneider, 1077.
- Geology of river channels about Manhattan Island, Hobbs, 585.
- Geology of the serpentines of central New York, Schneider, 1081.
- Glacial conditions on Long Island, Buffet, 137.
- Glacial period on Long Island, Veatch, 1247.
- Guelph fauna of New York, Clarke and Ruedemann, 204.
- Hamilton formation in central New York, Cleland, 207.
- Horseheads outlet of Glacial lakes of central New York, Fuller, 422.
- Index to publications of New York State Natural History Survey, Ellis, 362.
- Limestones in central New York, Schneider, 1078.
- Magnetite deposits at Mineville, Ries, 1011.
- Manlius formation of New York, Schuchert, 1089.
- Marcellus fault, Schneider, 1079.
- Mastodons of New York, Clarke, 196.
- Naples fauna in western New York, Clarke, 200.
- New term for Upper Cambrian series, Walcott, 1253.
- New York mineral localities, Whitlock, 1311.
- Northumberland volcanic plug, Woodworth, 1352.
- Olean rock section, Clarke, 197.
- Origin of faunas of Marcellus shales of New York, Clarke, 202.
- Oriskany sandstone, Wheelock, 1293.
- Paleozoic coral reefs, Grabau, 466.
- Peat and its occurrence in New York, Ries, 1025.
- Petrography and age of the Northumberland rock, Cushing, 259.
- Physiographic belts in western New York, Gilbert, 447.
- Portland cement industry in New York, Eckel, 342.
- Pre-Iroquois channels between Syracuse and Rome, Fairchild, 385.
- Pre-Kansan and Iowan deposits of Long Island, Fuller, 421.
- Problem of Niagara, Grabau, 468.
- Quarries of blue-tone, Dickinson, 296.
- Report of director of State Museum, Merrill, 887.
- Report of State paleontologist, Clarke, 195.
- Results of resurvey of Long Island, Fuller and Veatch, 427.
- River terraces and reversed drainage, Mills, 909.
- Rock floor of the vicinity of New York, Hobbs, 588.
- Rocks of Rondout, Van Ingen and Clark, 1240.
- Rossie lead veins, Smyth, 1147.
- Sedentary impression known as Climaetichnites, Woodworth, 1351.
- Shifting of faunas, Williams, 1320.
- Soil survey of the Bigflats area, Mesmer and Hearn, 894.
- Soil survey of the Lyons area, Hearn, 537.
- Soil survey of the Westfield area, Burke and Marean, 142.

New York—Continued.

- Story of Niagara, Hitchcock, 578.
 Stratigraphy of Beecraft Mountain, Grabau, 465.
 Stratigraphy of Portage formation, Luther, 820.
 Type case in diversion of drainage, Carney, 172.
 Type specimens of Paleozoic fossils in New York State Museum, Clarke, 203.
 Whetstone industry, Schneider, 1080.

Nicaragua.

- Gold fields of eastern Nicaragua, Gottschalk, 463.

Nomenclature.

- Classification of New York geologic formations, Clarke, 201.
 Cobleskill limestone of New York, Hartnagel, 505.
 Dates of publication of certain genera of fossil vertebrates, Bush, 147.
 Geological structure of New Mexican bolson plains, Keyes, 680.
 Geology of eastern New York, Prosser, 983.
 Glacial Lake Jean Nicolet, Upham, 1232.
 Lower Carboniferous of Appalachian basin, Stevenson, 1182.
 New term for Upper Cambrian series, Walcott, 1253.
 Nomenclature of Ohio geological formations, Prosser, 982.
 Permian question in America, Keyes, 682.
 Quantitative classification of igneous rocks, Cross and others, 251.
 Results of the late Minnesota Geological Survey, Winchell, 1337.
 Twenty-fourth Ann. Rept. U. S. Geol. Surv., Walcott, 1255.
 Word geest in geology, Dryer, 326.

North Carolina.

- Clays of the United States, Ries, 1024.
 Copper deposits of Appalachian States, Weed, 1278.
 Copper-bearing rocks of Virgilina copper district, Watson, 1270.
 Cranberry folio, Keith, 659.
 Iron ore deposits of the Cranberry district, Keith, 660.
 Meteoreisen von Locust Grove, Cohen, 220.
 Recent changes in North Carolina coast, Cobb, 213.
 Soil survey from Raleigh to Newbern, Smith, 1141.
 Soil survey of Alamance County, Coffey and Hearn, 215.
 Soil survey of the Cary area, Coffey and Hearn, 216.
 Soil survey of the Hickory area, Caine, 151.
 Soil survey of the Mount Mitchell area, Caine and Mangum, 152.
 Soil survey of the Statesville area, Dorsey, 314.
 Stream contest along the Blue Ridge, Davis, 285.
 Talc deposits of North Carolina, Keith, 662.

North Dakota.

- Origin of North Dakota lignites, Wilder, 1317.
 Soil survey of the Grand Forks area, Jensen and Neill, 643.

Ohio.

- Cincinnati group in western Tennessee, Foerste, 407.
 Clays of the United States, Ries, 1024.
 Composition and occurrence of petroleum, Mabery, 823.
 Devonian era in Ohio basin, Claypole, 206.
 Drainage modifications in Ohio, West Virginia, and Kentucky, Tight, 1203.
 Eastern Ohio oil fields, Griswold, 489.
 Field geology in Ohio State University, Mead, 868.
 Lower Carboniferous of Appalachian basin, Stevenson, 1182.
 Meteoreisen von Cincinnati, Cohen, 222.
 Nomenclature of Ohio geological formations, Prosser, 982.
 Ohio natural gas fields, Bownocker, 117.
 Organization and work of the Geological Survey of Ohio, Orton, 944a.
 Petroleum and natural gas in Ohio, Bownocker, 117a.
 Richmond group and its subdivisions, Nickles, 932.
 Richmond Group of Cincinnati anticline, Foerste, 409.
 Shifting of faunas, Williams, 1320.
 Soil survey of Montgomery County, Dorsey and Coffey, 312.
 Soil survey of the Columbus area, Smith, 1145.
 Soil survey of the Toledo area, Smith, 1144.

Oklahoma.

- Dikes in the Oklahoma Panhandle, Waldo, 1256.
 Geology of the Antelope Hills, Sherwin, 1103.
 Origin of gypsum deposits, Sherwin, 1104.
 Stratigraphic relations of Red Beds, Adams, 6.

Ordovician.*Appalachian region.*

- Manganese ore deposits of Georgia, Watson, 1272.
 Ordovician section near Bellefonte, Collie, 228.
 Paleozoic faunas, Weller, 1291.

Canada.

- First Eparchean formation, Ami, 27.
 Formation of sedimentary deposits, Wilson, 1334.
 Geological exploration in district of White Bay, Howley, 620.
 Geology of St. Helen's Island, Nolan and Dixon, 934.
 Ordovician succession in eastern Ontario, Ami, 25.
 Rock contacts in the Kingston district, Ells, 367.

Great Basin region.

- Geology of Nevada, Spurr, 1155.

Mississippi Valley region.

- Geology of Howard County, Iowa, Calvin, 158.
 Geology of Minnesota, Hall, 495.
 Geology of Missouri, Gallaher, 429.

New England and New York.

- Calciferous formation of Mohawk Valley, Cleland, 208.
 Faunas of the Trenton, Raymond, 997.
 Field work at Larrabee's Point, Vermont, Shimer, 1105.

Ordovician—Continued.*New England and New York—Continued.*

Stratigraphy of Beeraft Mountain, Grabau, 465.

Ohio Valley region.

Cincinnati group in western Tennessee, Foerste, 407.

Columbia folio, Hayes and Ulrich, 533.

Nomenclature of Ohio geological formations, Prosser, 982.

Petroleum and natural gas in Ohio, Bow-nocker, 117a.

Richmond group and its subdivisions, Nickles, 932.

Richmond group of Cincinnati anticline, Foerste, 409.

Ripple marks in Hudson limestone of Jefferson County, Culbertson, 253.

Section across southern Indiana, Newsom, 929.

Silurian and Devonian limestones of western Tennessee, Foerste, 408.

Structural features of Homotrypa, Bassler, 60.

Trenton rock petroleum, Blatchley and Sheak, 93.

Rocky Mountain region.

Carboniferous formations and faunas of Colorado, Girty, 455.

Southwestern region.

Tishomingo folio, Taff, 1192.

Oregon.

Artesian basins in Idaho and Oregon, Russell, 1049.

Fossil turtles from Oregon, Hay, 516.

Geology of Crater Lake, Diller, 300.

Geology of Idaho and Oregon, Russell, 1048.

Gold production of North America, Lindgren, 802.

Great lava-flood, Redway, 1007.

Klamath Mountains, Diller, 299.

Marine sediments of eastern Oregon, Washburne, 1265.

Mounts Hood and Adams and their glaciers, Reid, 1011.

Mylagaulodon from upper John Day, Sinclair, 1116.

Port Orford folio, Diller, 301.

Quicksilver deposits of Oregon, Dennis, 295.

Paleogeography.

Columbia folio, Tennessee, Hayes and Ulrich, 533.

Devonian era in Ohio basin, Claypole, 206.

Devonian and Ontario formations of Maryland, Schuchert, 1092.

Cobleskill limestone of New York, Hartnagel, 505.

Naples fauna in western New York, Clarke, 200.

Submerged tributary to the pre-Glacial river of the Gulf of St. Lawrence, Poole, 976.

Paleontology.*Cambrian.*

Cambrian brachiopoda and mollusca of Mt. Stephen, Matthew, 857.

Cambrian rocks of Cape Breton, Matthew, 858.

Paleontology—Continued.*Cambrian—Continued.*

Cambrian Dictyonema fauna of eastern New York, Ruedemann, 1042.

Development in size of the inarticulate brachiopods of the basal Cambrian, Matthew, 855.

Did the upper Etehemian fauna invade eastern Canada from the southeast?, Matthew, 856.

Oboloid shells of the Cambrian system in Canada, Matthew, 854.

Paleozoic faunas, Weller, 1291.

Phylogenie stage of Cambrian gastropoda, Sardeson, 1068.

Carboniferous.

Batrachian footprints, Matthew, 861.

Batrachian footprints of Carboniferous system, Matthew, 859.

Carboniferous ammonoids of America, Smith, 1137.

Carboniferous fishes from central Western States, Eastman, 337.

Carboniferous formations and faunas of Colorado, Girty, 455.

Carboniferous invertebrates, Beede, 64.

Carboniferous rocks of Kansas section, Adams, 10.

Carboniferous terrestrial arthropod fauna of Illinois, Melander, 875.

Coal Measure bryozoa of Nebraska, Condra, 238.

Columbia folio, Tennessee, Hayes and Ulrich, 533.

Contribution to Indiana Paleontology, Greene, 481, 485.

Codonotheca, new type of spore-bearing organ from Coal Measures, Sellards, 1096.

Fossil faunas of Olean quadrangle, Butts, 148.

Fossil insects in Permian of Kansas, Sellards, 1097.

Fossil plants of Onaga, Crevecoeur, 246.

Fossil plants from Carboniferous and Permian formations of Kansas, White, 1296.

Invertebrate fossils from Carboniferous section of Kansas, Girty, 456.

Klamath Mountain section, Diller, 302.

Osteology of Embolophorus dollovisianus, Case, 174.

Paleozoic cockroaches, Sellards, 1095.

Peccolite modification among Permian dipnoans, Eastman, 338.

Permian life of Texas, Sternberg, 1176.

Report of State geologist of Nebraska, Barbour, 56.

Rhombopora lepidodendroides Meek, Condra, 239.

Vertebrates from Permian of Texas, Case, 175.

Cretaceous.

Corals of Buda limestone, Vaughan, 1244.

Cretaceous actinopteron fishes, Hay, 517.

Cretaceous and Tertiary plants of Canada, Penhallow, 967.

Cretaceous beds of Long Island, Hollick, 593.

Cretaceous fishes, Williston, 1330.

Flora of the Matawan formation, Berry, 76.

Paleontology—Continued.

Cretaceous—Continued.

Fossil Cyrena from Alberta, Whiteaves, 1302.
Fossil ferns from the Laramie group of Colorado, Hollick, 591.

Fossil petal and fruit from Kansas, Hollick, 592.

Fossils from the Vancouver Cretaceous, Whiteaves, 1308.

Fresh-water molluscan faunule from Cretaceous of Montana, Stanton, 1166.

Ganoid- und Knochen-fische aus der Kreide formation von Kansas, Loomis, 808.

Geology of Cerrillos Hills, Johnson, 647.

Marine turtle Archelon, Wieland, 1313.

Mollusca of Buda limestone, Shattuck, 1098.

New Unios from the Laramie, Whitfield, 1309.

Plants from the Matavan formation, Berry, 75.

Pseudoceratites of the Cretaceous, Hyatt, 625.

Recent literature on Laramie formation, Hay, 514.

Report of State geologist of Nebraska, Barbour, 56.

Starfish from the Fort Benton, Douglass, 316.

Teleosts of the Upper Cretaceous, Stewart, 1186.

Devonian.

Acidaspis from Marcellus shale, Hitchcock, 577.

Columbia folio, Tennessee, Hayes and Ulrich, 533.

Contribution to Indiana Paleontology, Greene, 480-485.

Correlation of geological faunas, Williams, 1321.

Devonian era in Ohio basin, Claypole, 206.

Devonian fish fauna of Iowa, Eastman, 338.

Devonic worms, Clarke, 199.

Drift fossils, Hollick, 594.

Dwarf fauna of Tully limestone, Loomis, 809.

Fauna of Stafford limestone of New York, Talbot, 1193.

Fauna of the Agoniatite limestone of Onondaga County, N. Y., Wilson, 1335.

Faunal provinces of middle Devonian of America, Schuchert, 1090.

Fossil faunas of Olean quadrangle, Butts, 148.

Geology of Onondaga County, N. Y., Schneider, 1077.

Hamilton formation in central New York, Cleland, 207.

Klamath Mountain section, Diller, 302.

Naples fauna in western New York, Clarke, 200.

Observations on Romingeria, Beecher, 63.

Paleozoic faunas, Weller, 1291.

Rocks of Rondout, Van Ingen and Clark, 1240.

Shifting of faunas, Williams, 1320.

Siluric cystoidea, Schuchert, 1091.

Stratigraphy of Becraft Mountain, Grabau, 465.

Jurassic.

Brachiosaurus altithorax, Riggs, 1028.

Dinosaur from upper Jurassic, Osborn, 945.

Jurassic fossils from East Greenland, Madsen, 836.

Paleontology—Continued.

Jurassic—Continued.

New genus and species from Jurassic of Colorado, Hay, 515.

New sauropod dinosaur from Jurassic of Colorado, Hatcher, 511.

Osteology of Haplocanthosaurus, Hatcher, 507.

Ordovician.

Calcareous formation of Mohawk Valley, Cleland, 208.

Columbia folio, Tennessee, Hayes and Ulrich, 533.

Faunas of the Trenton, Raymond, 997.

Geological notes, Grant, 473.

Geology of Howard County, Iowa, Calvin, 158.

Harris collection of invertebrate fossils, Schuchert, 1088.

Isochilinae from Canada, Jones, 655.

Morphogenesis of Platystrophia, Cumings, 254.

New species of Matheria, Whiteaves, 1304.

Ordovician section near Bellefonte, Pa., Collie, 228.

Paleozoic faunas, Weller, 1291.

Richmond group and its subdivisions, Nickles, 932.

Silurian and Devonian limestones of western Tennessee, Foerste, 408.

Structural features of Homotrypa, Bassler, 60.

Quaternary.

Canidae of California, Merriam, 883.

Discovery of the Lansing skeleton, Concanon, 237.

Exploration of Potter Creek cave, Shasta County, Cal., Sinclair, 1115.

Fossil land shells of old forest bed of Ohio River, Billups, 79.

Fossil man of Lansing, Kans., Pearson, 963.

Glyptodont from Texas Pleistocene, Osborn, 946.

Ground sloth from Nebraska Pleistocene, Brown, 134.

Marine Pliocene and Pleistocene of California, Arnold, 38.

Mastodons of New York, Clarke, 196.

Observations paléontologiques dans l'Alaska, Gaudry, 436.

Platygonus compressus Le Conte, Wagner, 1252.

Pleistocene mollusks of White Pond, Baker, 54.

Valley loess and fossil man of Lansing, Upham, 1226.

Silurian.

Cobleskill limestone of New York, Hartnagel, 505.

Columbia folio, Tennessee, Hayes and Ulrich, 533.

Contribution to Indiana Paleontology, Greene, 480.

Eurypterid fauna from the Salina, Sarle, 1070.

Geological notes, Grant, 473.

Geology of Onondaga County, N. Y., Schneider, 1077.

Guelph fauna of New York, Clarke and Ruedemann, 204.

Paleontology—Continued.*Silurian*—Continued.

Manlius formation of New York, Schuchert, 1089.

Observations on Halysites, Whitfield, 1310.

Paleozoic faunas, Weller, 1291.

Rocks of Rondout, Van Ingen and Clark, 1240.

Silurian and Devonian limestones of western Tennessee, Foerste, 408.

Stratigraphy of Becraft Mountain, Grabau, 465.

Tertiary.

Addition to coral fauna of the Aquia Eocene formation of Maryland, Vaughan, 1241.

Canidae of California, Merriam, 883.

Conrad collection of Vicksburg fossils, Casey, 178.

Corrections to nomenclature of Eocene corals, Vaughan, 1243.

Cretaceous and Tertiary plants of Canada, Penhallow, 967.

Eocene mammalia, Wortman, 1355.

Fauna of Titanotherium beds, Matthew, 863.

Fossil turtles from Oregon, Hay, 516.

Hedgehog from American Oligocene, Matthew, 864.

Klamath Mountain section, Diller, 302.

Marine Pliocene and Pleistocene of California, Arnold, 38.

Mylogaulodon from upper John Day of Oregon, Sinclair, 1116.

New Conus from Tertiary of Florida, Aldrich, 17.

New genus of Eocene Eulimidae, Casey, 177.

New species of Eocene fossils, Aldrich, 18.

New species of Tertiary fossils, Aldrich, 16.

New three-toed horse, Gidley, 438.

Platygonus from Texas Pliocene, Gidley, 439.

Recent zoopaleontology, Osborn, 951.

Redescription of the coral *Platytrochus speciosus*, Vaughan, 1242.

Studies of gastropoda, Grabau, 467.

Tertiary fauna at Kap Dalton, Ravn, 996.

Tertiary fauna of Florida, Dall, 261.

Vertebrates from the Montana Tertiary, Douglass, 317.

Triassic.

Collection of Triassic fishes at Yale, Eaton, 340.

Ichthyosauria from Triassic of California, Merriam, 882.

Primitive characters of the Triassic Ichthyosaurus, Merriam, 885.

Recent literature on Triassic Ichthyosauria, Merriam, 884.

Invertebrate.

Acidaspis from Marcellus shale, Hitchcock, 577.

Addition to coral fauna of the Aquia Eocene formation of Maryland, Vaughan, 1241.

Arizona diatomite, Blake, 83.

Calcareous formation of Mohawk Valley, Cleland, 208.

Cambrian brachiopoda and mollusca of Mount Stephen, Matthew, 857.

Cambrian rocks of Cape Breton, Matthew, 858.

Canadian specimens of Lituities, Whiteaves, 1306.

Paleontology—Continued.*Invertebrate*—Continued.

Carboniferous ammonoids of America, Smith, 1137.

Carboniferous formations and faunas of Colorado, Girty, 455.

Carboniferous invertebrates, Beede, 64.

Carboniferous rocks of Kansas section, Adams, 10.

Carboniferous terrestrial arthropod fauna of Illinois, Melander, 875.

Cardioceras from the Crows Nest coal fields, Whiteaves, 1305.

Catalogue of type specimens of Paleozoic fossils in New York State Museum, Clarke, 203.

Coal Measure bryozoa of Nebraska, Condra, 238.

Columbia folio, Tennessee, Hayes and Ulrich, 533.

Conrad collection of Vicksburg fossils, Casey, 178.

Contribution to Indiana Paleontology, Greene, 480-485.

Corals of Buda limestone, Vaughan, 1241.

Corrections to nomenclature of Eocene fossil corals, Vaughan, 1243.

Correlation of geological faunas, Williams, 1321.

Development of biserial arm in certain crinoids, Grabau, 464.

Development in size of the inarticulate brachiopods of the basal Cambrian, Matthew, 855.

Devonian era in Ohio basin, Claypole, 206.

Devonic worms, Clarke, 199.

Diatom-earth in Arizona, Blake, 84.

Did the upper Etehemian fauna invade eastern Canada from the southeast? Matthew, 856.

Drift fossils, Hollick, 594.

Dwarf fauna of Tully limestone, Loomis, 809.

Eurypterid fauna from the Salina, Sarle, 1070.

Fauna of Stafford limestone of New York, Talbot, 1193.

Fauna of the Agoniatite limestone of Onondaga County, N. Y., Wilson, 1335.

Fossil Cyrena from Alberta, Whiteaves, 1302.

Fossil insects in Permian of Kansas, Sellards, 1097.

Fossil land shells of old forest bed of Ohio River, Billups, 79.

Fossils from Mount Noyes (Canadian Rockies), Woodward, 1349.

Fossils from the Vancouver Cretaceous, Whiteaves, 1308.

Fresh-water molluscan faunule from Cretaceous of Montana, Stanton, 1166.

Geology of Cerrillos Hills, Johnson, 647.

Geology of Howard County, Iowa, Calvin, 158.

Geology of Onondaga County, N. Y., Schneider, 1077.

Guelph fauna of New York, Clarke and Ruedemann, 204.

Hamilton formation in central New York, Cleland, 207.

Harris collection of invertebrate fossils, Schuchert, 1088.

Paleontology—Continued.*Invertebrate—Continued.*

- Index to publications of New York State Natural History Survey, Ellis, 362.
- Invertebrate fossils from Carboniferous section of Kansas, Girty, 456.
- Isochilinae from Canada, Jones, 655.
- Jurassic fossils from east Greenland, Madsen, 836.
- Manlius formation of New York, Schuchert, 1089.
- Marine Pliocene and Pleistocene of San Pedro, Arnold, 38.
- Mode of existence of Orthoceras, Ruedemann, 1044.
- Mollusca of Buda limestone, Shattuck, 1098.
- Morphogenesis of Platystrophia, Cumings, 254.
- Morphology of the Madreporaria, Duerden, 328.
- Morphology of the pelecypods, Ruedemann, 1043.
- Morse on living brachiopods, Schuchert, 1087.
- Naples fauna in western New York, Clarke, 200.
- New Conus from Tertiary of Florida, Aldrich, 17.
- New fossil Ashmunella, Cockerell, 214.
- New genus of Eocene Eulimidae, Casey, 177.
- New species of Eocene fossils, Aldrich, 18.
- New species of Matheria, Whiteaves, 1304.
- New species of Tertiary fossils, Aldrich, 16.
- New Unios from the Laramie, Whitfield, 1309.
- Oboloid shells of the Cambrian system in Canada, Matthew, 854.
- Observations on genus Romingeria, Beecher, 63.
- Observations on Halysites, Whitfield, 1310.
- Observations on Romingeria, Sardeson, 1068.
- Ordovician section near Bellefonte, Pa., Collie, 228.
- Paleozoic cockroaches, Sellards, 1095.
- Paleozoic faunas, Weller, 1291.
- Phylogenic stage of Cambrian gastropoda, Sardeson, 1068.
- Phylogeny of Fusidae, Grabau, 470.
- Pleistocene mollusks of White Pond, Baker, 54.
- Prehistoric California, Yates, 1365.
- Pseudoceratites of the Cretaceous, Hyatt, 625.
- Redescription of the coral Platytrochus speciosus, Vaughan, 1242.
- Report of State geologist of Nebraska, Barbour, 56.
- Revision of the blastoideae, Hambach, 498.
- Richmond group and its subdivisions, Nickles, 932.
- Rhombopora lepidodendroides Meek, Condra, 239.
- Sedentary impression known as Climaetichnites, Woodworth, 1351.
- Septal sequence in Paleozoic corals, Duerden, 327.
- Shells of marls, Walker, 1257.
- Siluric cystoidea, Schuchert, 1091.
- Star-fish from the Fort Benton, Douglass, 316.

Paleontology—Continued.*Invertebrate—Continued.*

- Stratigraphy of Becraft Mountain, Grabau, 465.
- Structural features of Homotrypa, Bassler, 60.
- Studies of gastropoda, Grabau, 467.
- Tertiary fauna at Kap Dalton, Ravn, 996.
- Tertiary fauna of Florida, Dall, 261.
- Torsion of the lamellibranch shell, Clarke, 198.
- Vertebrate.*
- Additional remarks on Diplodocus, Hatcher, 508.
- American pelycosauria, Case, 176.
- Ancestry of the dogs, Matthew, 867.
- Astrodon (Pleurocelus) in the Atlantosaurus beds of Wyoming, Hatcher, 509.
- Batrachian footprints, Matthew, 860, 861.
- Batrachian footprints of Carboniferous system, Matthew, 859.
- Brachiosaurus altithorax, Riggs, 1028.
- Canide of California, Merriam, 883.
- Carboniferous fishes from central western States, Eastman, 337.
- Characters of Pteranodon, Eaton, 341.
- Collection of fossil vertebrates in American Museum of Natural History, Matthew, 866.
- Collection of Triassic fishes at Yale, Eaton, 340.
- Composition of shells of turtles, Hay, 518.
- Crania of extinct bisons from the Klondike Creek gravels, Whiteaves, 1303.
- Cretaceous actinopteros fishes, Hay, 517.
- Cretaceous fishes, Williston, 1330.
- Dates of publication of certain genera of fossil vertebrates, Bush, 147.
- Dental grooves and teeth in Baptanodon, Gilmore, 452.
- Development of sharks, Dean, 292.
- Devonian era in Ohio basin, Claypole, 206.
- Devonian fish fauna of Iowa, Eastman, 338.
- Dinosaur from Upper Jurassic, Osborn, 945.
- Discovery of the Lansing skeleton, Concanon, 237.
- Eocene mammalia, Wortman, 1355.
- Evolution of the horse, Beasley, 61.
- Evolution of the horse, Matthew, 865.
- Evolution of the proboscidea in North America, Osborn, 951.
- Exploration of Potter Creek cave, Shasta County, Cal., Sinclair, 1115.
- Fauna of Titanotherium beds, Matthew, 863.
- Fossil man of Lansing, Kans., Pearson, 963.
- Fossil man of Lansing, Kans., Williston, 1329.
- Fossil turtles from Oregon, Hay, 516.
- Ganoid- und Knochen-fische aus der Kreideformation von Kansas, Loomis, 808.
- Genus Baptanodon, with description of new species, Knight, 696.
- Glyptodont from Texas Pleistocene, Osborn, 946.
- Greatest flying creature, Langley, 767.
- Greatest flying creature, Lucas, 817.
- Ground sloth from Nebraska Pleistocene, Brown, 134.
- Hedgehog from American Oligocene, Matthew, 864.

Paleontology—Continued.

Vertebrate—Continued.

- Ichthyosauria from Triassic of California, Merriam, 882.
 Identification of Meckelian and myelohyoid grooves in mammals, Bensley, 71.
 Jaw of *Dryptosaurus*, Lambe, 751.
 Locality furnishing Cretaceous fishes, Hay, 520.
 Mammals in the swamps of Whitman County, Sternberg, 1177.
 Marine turtle Archelon, Wieland, 1313.
 Mastodons of New York, Clarke, 196.
 Models and restorations of extinct animals, Osborn, 953.
Mylagaulodon from upper John Day of Oregon, Sinclair, 1116.
 New genus and species from Jurassic of Colorado, Hay, 515.
 New plesiosaur, Lucas, 816.
 New sauropod dinosaur from Jurassic of Colorado, Hatcher, 511.
 New three-toed horse, Gidley, 438.
 North American plesiosaurs, Williston, 1325.
 Notes on Judith River group, Sternberg, 1178.
 Observations paléontologiques dans l'Alaska, Gaudry, 436.
 Opisthocœlian dinosaurs, *Apatosaurus*, Riggs, 1029.
 Osteology and relationship of fossil birds, Lucas, 814.
 Osteology of *Embolophorus dollovi*, Case, 174.
 Osteology of *Haploecanthosaurus*, Hatcher, 507.
 Osteology of *Nyctosaurus*, Williston, 1326.
 Peculiar modification amongst Permian dipnoans, Eastman, 338.
Platygonus compressus Le Conte, Wagner, 1252.
Platygonus from Texas Pliocene, Gidley, 439.
 Prehistoric California, Yates, 1365.
 Primitive characters of the Triassic Ichthyosaurus, Merriam, 885.
 Recent literature on Laramie formation, Hay, 514.
 Recent literature on Triassic Ichthyosauria, Merriam, 884.
 Recent zoopaleontology, Osborn, 951.
 Remarkable fossil discovery, Beasley, 62.
 Report of State geologist of Nebraska, Barbour, 56.
 Reptilian subelasses Diapsida and Synapsida and early history of the Diaptosauria, Osborn, 948.
 Skeleton of *Hesperornis*, Lucas, 815.
 Skull of *Creosaurus*, Osborn, 947.
 Skull of *Triceratops serratus*, Lull, 818.
 Snout-fishes of Kansas, Hay, 519.
 Some osteological terms, Williston, 1328.
Stegoceras and *Stereoccephalus*, Lambe, 752.
 Structure of plesiosaurian skull, Williston, 1327.
 Teleosts of the Upper Cretaceous, Stewart, 1186.
 Tortoise from the auriferous gravels of California, Sinclair, 1117.
 Use of pneumatic tools in preparation of fossils, Riggs, 1031.

Paleontology—Continued.

Vertebrate—Continued.

- Valley loess and fossil man of Lansing, Up- ham, 1226.
 Vertebrates from Permian of Texas, Case, 175.
 Vertebrates from the Montana Tertiary, Douglass, 317.
 Vertebrate paleontology in the U. S. Geological Survey, Osborn, 954.
 Vertebral column of *Brontosaurus*, Riggs, 1030.
Paleobotany.
 Aralia in American paleobotany, Berry, 77.
 Bog plant societies of northern North America, Trauseau, 1213.
 Carboniferous fossils in Ocoee slates, Smith, 1125.
Codonotheca, new type of spore-bearing organ from Coal Measures, Sellards, 1096.
 Cretaceous and Tertiary plants of Canada, Penhallow, 967.
 Cretaceous beds of Long Island, Hollick, 593.
 Cycad investigation, Wieland, 1315.
 Flora of the Matawan formation, Berry, 76.
 Fossil ferns from the Laramie group of Colorado, Hollick, 591.
 Fossil petal and fruit from Kansas, Hollick- 592.
 Fossil plants from Carboniferous and Permian formations of Kansas, White, 1296.
 Geology of Cerrillos Hills, Johnson, 647.
 New fossil species of *Chara*, Knowlton, 699.
 Organic remains in post-Glacial deposits, Olson-Seffer, 940.
Osmundites skidegatenensis n. sp., Penhallow, 966.
 Permian elements in the Dunkard flora, White, 1297.
 Plants from the Matawan formation, Berry, 75.
 Prehistoric California, Yates, 1365.
 Report of State geologist of Nebraska, Barbour, 56.
 Tertiary plants, Penhallow, 968.
 Volcanic ash beds of Montana, Rowe, 1038.
General.
 Distribution of *Daimonelix*, Barbour, 57.
 Photography of fossils, Van Ingen, 1239.
 Polar climate in time the major factor in the evolution of plants and animals, Wieland, 1314.
Genera and species described.
Acanthopecten new subg., Girty, 455.
 carboniferus Stevens, Girty, 455.
Acer dubium n. sp., Penhallow, 967.
Aeidaspis whitfieldi n. sp., Hitchcock, 578.
Acila H. & A. Adams, Arnold, 38.
Aelisia stevensiana Meek and Worthen?, Girty, 455.
Acmea Eschscholtz, Arnold, 38.
 cerrillosensis n. sp., Johnson, 647.
 depicta Hinds, Arnold, 38.
 insessa Hinds, Arnold, 38.
 instabilis Gould, Arnold, 38.
 mitra Eschscholtz, Arnold, 38.
 paleacea Gould, Arnold, 38.
 pelta Eschscholtz, Arnold, 38.
 spectrum (Nuttall) Reeve, Arnold, 38.
Acompoceras n. gen., Hyatt, 625.

Paleontology—Continued.

Genera and species described—Continued.

- Aconeceras* n. gen., Hyatt, 625.
Acerinus amphora Wachsmuth and Springer, Grabau, 464.
Acrostichum haddeni n. sp., Hollick, 591.
Acrothele abavia, Matthew, 858.
 avia, Matthew, 858.
 avia-puteis, Matthew, 858.
 proles, Matthew, 858.
 subsida White, Matthew, 857.
Acrothyra, Matthew, 858.
 proavia, Matthew, 858.
 proavia-crassa, Matthew, 858.
 proavia-prima, Matthew, 858.
 signata, Matthew, 858.
 signata-orta, Matthew, 858.
 signata-prima, Matthew, 858.
 signata-sera, Matthew, 858.
 signata-tarda, Matthew, 858.
Acrotreta cf. *baileyi*, Matthew, 857.
 bisecta, Matthew, 858.
 gemma var. *depressa* Walcott, Matthew, 857.
 papillata, Matthew, 858.
 papillata var. *lata*, Matthew, 858.
 papillata-prima n. mut., Matthew, 858.
 sipo, Matthew, 858.
 cf. *socialis* von Seebach, Matthew, 858.
Actæon Montfort, Arnold, 38.
 (*Rictaxis*) *punctocelata* Carpenter, Arnold, 38.
 traskii Stearns, Arnold, 38.
Actinopteria communis (Hall), Weller, 1291.
 decussata Hall, Weller, 1291.
 insignis Clarke?, Weller, 1291.
 reticulata n. sp., Weller, 1291.
 sola n. sp., Clarke, 200.
 textilis (Hall), Weller, 1291.
 textilis (Hall) var. *arenaria* (Hall), Weller, 1291.
Actinostroma trentonensis n. sp., Weller, 1291.
Admete Möller, Arnold, 38.
 gracilior Carpenter, Arnold, 38.
Admetopsis? *elevata* n. sp., Johnson, 647.
Ælurodon? *brachygnathus* n. sp., Douglass, 317.
Æora Conrad, Dall, 261.
Æsopus Gould, Arnold, 38.
Aganides discoïdalis n. sp., Smith, 1137.
 jessieæ Miller and Gurley, Smith, 1137.
 propinquus Winchell, Smith, 1137.
 romingeri Winchell, Smith, 1137.
 rotatorius de Koninck, Smith, 1137.
 sciotensis Miller and Faber, Smith, 1137.
 ? *shumardianus* Winchell, Smith, 1137.
Agassizocrinus carbonarius Worthen, Beede, 64.
Agathiceras Gemmellaro, Smith, 1137.
 ciscoense n. sp., Smith, 1137.
Agnostus cf. *cyclopyge* Tullberg, Matthew, 858.
 cf. var. *declivis*, Matthew, 858.
 trisectus Salt. mut. *germanus*, Matthew, 858.
 trisectus Salt. mut. *ponepunctus*, Matthew, 858.

Paleontology—Continued.

Genera and species described—Continued.

- Agoniatites* Meek, Smith, 1137.
 opimus White and Whitfield, Smith, 1137.
Agraulos saratogensis Walcott, Weller, 1291.
Agriopoma Dall, Dall, 261.
Aldrichella nom. nov., Vaughan, 1243.
Alectronia sp., Shattuck, 1098.
Aligena H. C. Lea, Arnold, 38.
 cerritensis n. sp., Arnold, 38.
Allerisma terminale Hall, Girty, 455.
Allogramma Dall, Dall, 261.
Allorisma costatum Meek and Worthen, Beede, 64.
 geinitzi Meek, Beede, 64.
 granosum (Shumard), Beede, 64.
 subcuneatum Meek, Beede, 64.
Alveolites dispansa n. sp., Greene, 483.
 subangularis n. sp., Greene, 483.
Amaura Möller, Arnold, 38.
Amblysiphonella prosseri Clarke, Beede, 64.
Ambocœlia planiconvexa Shumard, Girty, 455.
 planiconvexa (Shumard), Beede, 64.
 umbonata (Con.), Weller, 1291.
 umbonata Conrad, mut. *pluto* nov., Loomis, 809.
 umbonata Conrad, mut. *pygmaea* nov., Loomis, 809.
Amiantis, Carpenter, Dall, 261.
Amiantis Carpenter, Arnold, 38.
 section *Amiantis* s. s., Dall, 261.
 section *Eucallista* Dall, Dall, 261.
 callosa Conrad, Dall, 261.
Amphigenia elongata (Van.), Weller, 1291.
Amphissa H. and A. Adams, Arnold, 38.
 corrugata Reeve, Arnold, 38.
 ventricosa n. sp., Arnold, 38.
 versicolor Dall, Arnold, 38.
Amplexopora columbiana Ulrich and Bassler, Hayes and Ulrich, 533.
Amplexus sp., Girty, 455.
Anachis H. and A. Adams, Arnold, 38.
Anatina austinensis n. sp., Shattuck, 1098.
 subcylindracea n. sp., Whiteaves, 1308.
 texana n. sp., Shattuck, 1098.
Anchura callosa n. sp., Whiteaves, 1308.
Andromeda parlatorii Heer, Berry, 76.
Anemia robusta n. sp., Hollick, 591.
 supercretacea n. sp., Hollick, 591.
Angelina? sp.?, Matthew, 858.
Angelus Megerle, Arnold, 38.
Anisoceras cooperi Gabb sp., Whiteaves, 1308.
 subcompressum Forbes sp., Whiteaves, 1308.
Anogmus Cope, Hay, 517.
Anogmus Cope, Stewart, 1186.
 altus (Loomis), Hay, 517.
 aratus (Cope), Hay, 517.
 evolutus Cope, Hay, 517.
 evolutus Cope, Stewart, 1186.
 favirostris (Cope), Hay, 517.
 polymicrodus (Stewart), Stewart, 1186.
Anomalocardia Schumacher, Dall, 261.
 section *Anomalocardia* Schumacher, Dall, 261.
 section *Anomalodiscus* Dall, Dall, 261.
 bowdeniana n. sp., Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Anomalocardia brasiliiana* Gmelin, Dall, 261.
caloosana Dall, Dall, 261.
chipolana n. sp., Dall, 261.
dupliniana n. sp., Dall, 261.
floridana Conrad, Dall, 261.
Anomalodiscus Dall, Dall, 261.
Anomia Linné, Arnold, 38.
lampe, Gray, Arnold, 38.
limatula Dall, Arnold, 38.
navicelloides Aldr., Aldrich, 16.
Anomoeare parvula n. sp., Weller, 1291.
Anoplia nucleata Hall, Weller, 1291.
Anoplothea acutiplicata (Con.), Weller, 1291.
concava (Hall), Weller, 1291.
diehotoma (Hall), Weller, 1291.
fiabellites (Con.), Weller, 1291.
Antigona Schumacher, Dall, 261.
Aoroerinus casedayi Lyon, Rowley, 480.
casedayi var. *charlestownensis*, Rowley, 483.
Apatomerus mirus n. gen. and sp., Williston, 1326.
Apatosaurus Marsh, Riggs, 1029.
excelsus Marsh, Riggs, 1029.
Aphelops ? *ceratorhinus* n. sp., Douglass, 317.
Aphrodina Conrad, Dall, 261.
Aporema Dall, Dall, 261.
Aporrhais speciosa v. *Schlotheim* sp., Ravn, 996.
Apternodus mediaevus n. gen. and sp., Matthew, 863.
Aralia brittoniana n. sp., Berry, 76.
groenlandica Heer, Berry, 76.
mattewanensis n. sp., Berry, 76.
palmata Newb., Berry, 76.
ravniana Heer, Berry, 76.
 ? sp., Johnson, 647.
Araucarites ovatus Hollick, Berry, 76.
Area (Linné) Lamarek, Arnold, 38.
delicatula n. sp., Casey, 178.
invidiosa n. sp., Casey, 178.
labiata Sowerby, Arnold, 38.
madridensis n. sp., Johnson, 647.
vancouverensis Meek, Whiteaves, 1308.
vaughani n. sp., Casey, 178.
Archæocidaris agassizi Hall, Beede, 64.
cratis White, Girty, 455.
megastylus Shumard, Beede, 64.
ourayensis n. sp., Girty, 455.
triplex White?, Girty, 455.
trudifer White, Beede, 64.
trudifer White?, Girty, 455.
Archelon ischyros, Wieland, 1313.
Archinacella patelliformis (Hall), Weller, 1291.
Arges tuberculatus n. sp., Weller, 1291.
Argyrothea schucherti n. sp., Dall, 261.
Arisæma cretaceum Lesq., Berry, 76.
Asaphellus homfrayi, var., Matthew, 858.
 ? *planus*, Matthew, 858.
Ashmunella thompsoniana pecosensis n. subsp., Cockerell, 214.
Ashtarotha Dall, Dall, 261.
Asperipes n. gen., Matthew, 859.
Asperipes avipes n. sp., Matthew, 859.

Paleontology—Continued.

Genera and species described—Continued.

- Asplenium magnum* Knowlton, Hollick, 591.
Astarte Sowerby, Arnold, 38.
Astarte Sowerby, Dall, 261.
 section *Ashtarotha* Dall, Dall, 261.
 section *Astarte* s. s., Dall, 261.
 section *Crenimargo* Cossmann, Dall, 261.
 section *Digitaria* Wood, Dall, 261.
 section *Gonilia* Stoliczka, Dall, 261.
 section *Microstagon* Cossmann, Dall, 261.
 section *Neocrassina* Fischer, Dall, 261.
 section *Rictocyma* Dall, Dall, 261.
 section *Tridonta* Schumacher, Dall, 261.
 (*Goodallia* ?) *americana* n. sp., Dall, 261.
bayi Lundgren, Madsen, 836.
 (*Crassinella*) *branneri* n. sp., Arnold, 38.
coleni Conrad, Dall, 261.
concentrica var. *bella* Conrad, Dall, 261.
 (*Ashtarotha*) *cuneiformis* Conrad, Dall, 261.
 (*Ashtarotha*) *distans* Conrad, Dall, 261.
 sp. cf. *elegans* Sowerby, Madsen, 836.
evansi (H. and M.) Whitfield, Johnson, 647.
exaltata Conrad, Dall, 261.
 (*distans* var. ?) *floridana* Dall, Dall, 261.
glenni n. sp., Dall, 261.
hartzii Lundgren, Madsen, 836.
laurentiana Lyell, Dall, 261.
meridionalis Gabb, Dall, 261.
 (*Ashtarotha*) *obruta* Conrad, Dall, 261.
opulentora n. sp., Dall, 261.
 (*Ashtarotha*) *parma* n. sp., Dall, 261.
 (*Ashtarotha*) *perplana* Conrad, Dall, 261.
 sp. cf. *sæmanni* de Loriol, Madsen, 836.
symmetrica Conrad, Dall, 261.
 cfr. *tenera* Morris, Ravn, 996.
 (*Ashtarotha*) *undulata* Say, Dall, 261.
undulata var. *vaginulata* Dall, Dall, 261.
vicina Say, Dall, 261.
wagneri n. sp., Dall, 261.
Astartella vera Hall, Beede, 64.
Astrodon johnstoni Leily, Hatcher, 509.
Astropecten ? *montanus* n. sp., Douglass, 316.
Astyris H. and A. Adams, Arnold, 38.
Atrypa ? *lamellata* Hall, Weller, 1291.
reticularis (Linn.), Weller, 1291.
Atrypina imbricata (Hall), Weller, 1291.
Aucella pallasii Keyserling, Madsen, 836.
strongi n. sp., Johnson, 647.
Aulacorhynchus millipunctatus (Meek and Worthen), Beede, 64.
Aulopora ? *anna* Beede, Beede, 64.
 ? *prosseri* Beede, Beede, 64.
Austrodoomia Dall, Dall, 261.
Aviculopinna americana Meek, Beede, 64.
illinoensis Worthen, Beede, 64.
nebraskensis Beede, Girty, 455.
 ? *peracuta* Shumard, Girty, 455.
Aviculopecten carboniferus (Stevens), Beede, 64.
coxanus Meek and Worthen, Beede, 64.
germanus Miller and Faber, Beede, 64.
hertzeri Meek, Beede, 64.
interlineatus Meek and Worthen, Beede, 64.
 ? *interlineatus* Meek and Worthen, Girty, 455.

Paleontology—Continued.

Genera and species described—Continued.

- Aviculopecten maccoyi* Meek and Hayden, Beede, 64.
occidentalis (Shumard), Beede, 64.
occidentalis Shumard, Girty, 455.
pellucidus Meek and Worthen, Girty, 455.
providencensis (Cox), Beede, 64.
rectilaterarius (Cox), Beede, 64.
rectilaterarius Cox, Girty, 455.
sculptilis Miller, Beede, 64.
 sp., Girty, 455.
Axinopsis G. O. Sars, Dall, 261.
Axinulus Verrill and Bush, Dall, 261.
Axophyllum rudis White and St. John, Beede, 64.
Bactrites Sandberger, Smith, 1137.
carbonarius n. sp., Smith, 1137.
 (sp.) mut. *parvus* nov., Loomis, 809.
 (sp.) mut. *pygmaeus* nov., Loomis, 809.
Baculites anceps Lamarck, Johnson, 647.
Bairdia sp., Girty, 455.
Balanus Lister, Arnold, 38.
concaus Bronn, Arnold, 38.
Baptanodon, Merriam, 882.
Baptanodon (*Sauranodon*) Marsh, Gilmore, 452.
Baptanodon Marsh, Knight, 696.
marshi n. sp., Knight, 696.
Baptornis advenus, Lucas, 814.
Barillopus n. gen., Matthew, 859.
unguifer Matt., Matthew, 859.
Baroda Stoliczka, Dall, 261.
Baropezia n. gen., Matthew, 859.
sydnensis (Dawson), Matthew, 859.
Baropus unguifer n. sp., Matthew, 861.
Barroisiceras hyatti n. sp., Shattuck, 1098.
texanum n. sp., Shattuck, 1098.
Bathygens alpha Douglas, Matthew, 863.
Bathyurus ellipticus Cleland, Cleland, 208.
 ? *levis* n. sp., Cleland, 208.
 ? sp. undet., Weller, 1291.
Batissa Gray, Dall, 261.
Batostomella Ulrich, Condra, 238.
leia Condra, Condra, 238.
Beachia suessana (Hall), Weller, 1291.
Beguina Bolten, Dall, 261.
Bela Gray, Arnold, 38.
cretacea n. sp., Whiteaves, 1308.
fidicula Gould, Arnold, 38.
sancta-monicae n. sp., Arnold, 38.
Bellerophon bretonensis, Matthew, 858.
clausus Ulrich, Hayes and Ulrich, 533.
crassus Meek and Worthen, Girty, 455.
denckmanni n. sp., Clarke, 200.
giganteus Worthen?, Girty, 455.
insulae, Matthew, 858.
koeneni n. sp., Clarke, 200.
percarinatus Conrad?, Girty, 455.
shelbiensis n. sp., Clarke and Ruedemann, 204.
semisculptus, Matthew, 858.
 sp., Girty, 455.
Bellucina Dall, Dall, 261.
Beryx sp. undet., Johnson, 647.
Beyrichia barretti n. sp., Weller, 1291.

Paleontology—Continued.

Genera and species described—Continued.

- Beyrichia dagon* Clarke, Loomis, 809.
deckerensis n. sp., Weller, 1291.
jerseyensis n. sp., Weller, 1291.
kummeli n. sp., Weller, 1291.
manliensis n. sp., Weller, 1291.
montaguensis n. sp., Weller, 1291.
nearpassi n. sp., Weller, 1291.
perinflata n. sp., Weller, 1291.
smocki n. sp., Weller, 1291.
sussexensis n. sp., Weller, 1291.
triceps n. sp., Matthew, 858.
wallpackensis n. sp., Weller, 1291.
 sp., Girty, 455.
Billingsella retroflexa, Matthew, 858.
Bilobites varica (Con.), Weller, 1291.
Bittium Leach, Arnold, 38.
asperum Gabb, Arnold, 38.
californicum Dall and Bartsch, Arnold, 38.
filosum Gould, Arnold, 38.
quadrifilatum Carpenter, Arnold, 38.
rugatum Carpenter, Arnold, 38.
(Styliferina) tenuisculpta Carpenter, Arnold, 38.
williamsoni n. sp., Arnold, 38.
Bloctrophyllum houghtoni (Rominger), Greene, 485.
Bordenia knappi Hall, Greene, 480.
Bornia Philippi, Arnold, 38.
retifera Dall, Arnold, 38.
Borsonia Bellardi, Arnold, 38.
Bothroedendron ? n. sp., White, 1296.
Bourdotia Dall, Dall, 261.
Bowdenia Dall, Dall, 261.
Brachauchenius lucasi n. gen. and sp., Williston, 1325.
lucasi Williston, Lucas, 816.
Brachiosaurus altithorax, Riggs, 1028.
Bradoria, Matthew, 858.
 ? *ornata*, Matthew, 858.
rugulosa, Matthew, 858.
scrutator, Matthew, 858.
vigilans, Matthew, 858.
vigilans mut. *obesa*, Matthew, 858.
Bradorona, Matthew, 858.
observator, Matthew, 858.
observator var. *benepuncta*, Matthew, 858.
observator mut. *laevis*, Matthew, 858.
perspicator, Matthew, 858.
perspicator mut. *magna*, Matthew, 858.
perspicator mut. *major*, Matthew, 858.
spectator, Matthew, 858.
spectator var. *acuta*, Matthew, 858.
spectator mut. *aequata*, Matthew, 858.
spectator mut. *spinosa*, Matthew, 858.
Brimosaurus Leidy, Williston, 1325.
Brongniartia trentonensis (Simpson), Collic, 228.
Bronteus lunatus Bill., Weller, 1291.
Brontosaurus Marsh, Riggs, 1030.
Bucania punctifrons (Emm.), Weller, 1291.
Buchiola angolensis n. sp., Clarke, 200.
conversa n. sp., Clarke, 200.
halli n. sp., Clarke, 200.

Paleontology—Continued.

Genera and species described—Continued.

- Buchiola* ? *livoniae* n. sp., Clarke, 200.
lupina n. sp., Clarke, 200.
 cf. *pruiniensis* Steininger (sp.), Clarke, 200.
retrostriata v. Buch (sp.), Clarke, 200.
retrostriata v. Buch, mut. *pygmaea* nov., Loomis, 809.
scabrosa n. sp., Clarke, 200.
stuprosa n. sp., Clarke, 200.
Bulimorpha chrysalis Meek and Worthen, Girty, 455.
 ? *helderbergiae* n. sp., Weller, 1291.
Bulimulus sp.?, Ravn, 996.
Bulla Linné, Arnold, 38.
 punctulata A. Adams, Arnold, 38.
 quoyi Gray, Arnold, 38.
Bumastus elongatus n. sp., Weller, 1291.
 transversalis n. sp., Weller, 1291.
 trentonensis (Eum.), Weller, 1291.
Bumalurus infelix n. sp., Matthew, 863.
Bythocypris nearpassi n. sp., Weller, 1291.
Cadoceras crassum n. sp., Madsen, 836.
Cadulus Philippi, Arnold, 38.
 nitentior Carpenter, Arnold, 38.
Cæcum Fleming, Arnold, 38.
 californicum Dall, Arnold, 38.
 crebricinctum Carpenter, Arnold, 38.
magnum Stearns, Arnold, 38.
Calceocrinus granuliferus n. sp., Rowley, 481.
Callianassa whiteavesii Woodward, Whiteaves, 1308.
Calliostoma Swainson, Arnold, 38.
 annulatum Martyn, Arnold, 38.
 canaliculatum Martyn, Arnold, 38.
 costatum Martyn, Arnold, 38.
 gemmulatum Carpenter, Arnold, 38.
 tricolor Gabb, Arnold, 38.
Callista Poli, Arnold, 38.
 (*Amiantis*) *callosa* Conrad, Arnold, 38.
 newcombiana Gabb, Arnold, 38.
 subdiaphana Carpenter, Arnold, 38.
 subdiaphana Carpenter, *pedroana*, n. var., Arnold, 38.
Callithaca Dall, Dall, 261.
Callocardia A. Adams, Dall, 261.
 (*Agriopoma*) *gatunensis* n. sp., Dall, 261.
 gatunensis var. *multifilosa* Dall, Dall, 261.
 (*Agriopoma*) *morrhua* Linsley, Dall, 261.
 (*Agriopoma*) *parkeria* Glenn, Dall, 261.
 (*Agriopoma*) *sayana* Conrad, Dall, 261.
 (*Agriopoma*) *sincera* n. sp., Dall, 261.
 (*Agriopoma*) *subnasuta* Conrad, Dall, 261.
Calloneia filolum n. sp., Hall, Clarke, 200.
Callopora sp. undet., Weller, 1291.
Callucina Dall, Dall, 261.
Calymene camerata Con., Weller, 1291.
 niagarensis Hall, Clarke and Ruedemann, 204.
 senaria Con., Weller, 1291.
Calypptogena Dall, Dall, 261.
Camarella inornata n. sp., Weller, 1291.
Camerocheras proteiforme (Hall), Weller, 1291.
Camarocrinus ulrichi n. sp., Schuchert, 1091.
Camarotechia hudsonica n. sp., Grabau, 465.
 indianensis Hall, Clarke and Ruedemann, 204.

Paleontology—Continued.

Genera and species described—Continued.

- Camarotechia metallica* White, Girty, 455.
 ? *neglecta* Hall (sp.), Clarke and Ruedemann, 204.
Campeloma harlowtonensis n. sp., Stanton, 1166.
Campodus variabilis (Newberry and Worthen), Eastman, 337.
Campophyllin torquium (Owen), Beede, 61.
 torquium Owen, Girty, 455.
Cancellaria Lamarck, Arnold, 38.
 annosa Ald., Aldrich, 16.
 bifoliata n. sp., Aldrich, 16.
 cooperi Gabb, Arnold, 38.
 crawfordiana Dall, Arnold, 38.
 tritonidea Gabb, Arnold, 38.
Cancer Linné, Arnold, 38.
 breweri Gabb, Arnold, 38.
Canis indianensis Leidy, Merriam, 883.
Capulus corrugatus (nom. prov.), Whiteaves, 1308.
Cardiocardita Anton, Dall, 261.
Cardioceras canadense nom. prov., Whiteaves, 1305.
Cardiomorpha missouriensis Shumard, Beede, 61.
Cardiomya A. Adams, Dall, 261.
Cardita (Bruguière) Lamarck, Dall, 261.
 section *Cardita* s. s. Dall, 261.
 section *Carditamera* Conrad, Dall, 261.
 section *Glans* Megerle, Dall, 261.
 aldrichi n. sp., Casey, 178.
 (*Carditamera*) *arata* Conrad, Dall, 261.
 (*Carditamera*) *catharia* n. sp., Dall, 261.
 (*Carditamera*) *guppyi* Dall, Dall, 261.
 (*Carditamera*) *prestoni* n. sp., Dall, 261.
 (*Carditamera*) *recta* Conrad, Dall, 261.
 (*Carditamera*) *tegea* n. sp., Dall, 261.
 (*Carditamera*) *vaughani* n. sp., Dall, 261.
Carditamera Conrad, Dall, 261.
Carditella E. A. Smith, Dall, 261.
Cardites Link, Dall, 261.
Carditopsis Smith, Dall, 261.
Cardium (Linné) Lamarck, Arnold, 38.
 (*Granocardium*) *budense* n. sp., Shattuck, 1098.
 (*Cerastoderma*) *corbis* Martyn, Arnold, 38.
 (*Lævicardium*) *elatum* Sowerby, Arnold, 38.
 (*Ringicardium*) *procerum* Sowerby, Arnold, 38.
 (*Trachycardium*) *quadrigenarium* Conrad, Arnold, 38.
 (*Lævicardium*) *substriatum* Conrad, Arnold, 38.
 (*Protocardia*) *texanum* Conrad, Shattuck, 1098.
 (*Protocardia*) *vaughani* n. sp., Shattuck, 1098.
Carpenteroblastus veryi n. sp., Rowley, 481.
Carpolithus cliffwoodensis n. sp., Berry, 76.
 dubius n. sp., Berry, 76.
 juglandiformis n. sp., Berry, 76.
Carstenia n. gen., Hyatt, 625.
Caryophyllia arnoldi Vaughan, Arnold, 38.
 california Vaughan n. sp., Arnold, 38.
 pedroensis Vaughan n. sp., Arnold, 38.

Paleontology—Continued.

Genera and species described—Continued.

- Catopterus J. H. Redfield, Eaton, 340.
 Cavilucina Fischer, Dall, 261.
 Celastrophyllum elegans n. sp., Berry, 76.
 Centronella? bicipitata n. sp., Weller, 1291.
 Centronella? subrhomboidea n. sp., Weller, 1291.
 Cerastoderma Mörch, Arnold, 38.
 Ceraurus pleurexanthemus Green, Weller, 1291.
 Cerriocrinus craigi (Worthen), Beede, 64.
 hemisphericus (Shumard), Beede, 64.
 missouriensis (Miller and Gurley), Beede, 64.
 ? monticulatus Beede, Beede, 64.
 ? priscus n. sp., Rowley, 485.
 Cerithidea Swainson, Arnold, 38.
 californica Haldemann, Arnold, 38.
 Cerithium harveyi n. sp., Whiteaves, 1308.
 ? texanum n. sp., Shattuck, 1098.
 vancouverense n. sp., Whiteaves, 1308.
 Chænocardiola Holzapfel, Clarke, 200.
 Chænomys leavenworthensis (Meek and Hayden), Beede, 64.
 leavenworthensis Meek and Hayden, Girty, 455.
 Chætetes milleporaceus Milne-Edwards and Haime, Beede, 64.
 milleporaceus Milne-Edwards and Haime, Girty, 455.
 Chama (Pliny) Linné, Arnold, 38.
 Chama (Linné) Bruguière, Dall, 261.
 callosana n. sp., Dall, 261.
 chipolana n. sp., Dall, 261.
 congregata Conrad, Dall, 261.
 corticosa Conrad, Dall, 261.
 crassa Heilprin, Dall, 261.
 draconis n. sp., Dall, 261.
 exogyra Conrad, Arnold, 38.
 involuta Guppy, Dall, 261.
 lyelli n. sp., Dall, 261.
 macerophylla Gmelin, Dall, 261.
 mississippiensis Conrad, Dall, 261.
 monroensis n. sp., Aldrich, 16.
 pellucida Sowerby, Arnold, 38.
 striata Emmons, Dall, 261.
 tampaensis n. sp., Dall, 261.
 willcoxii Dall, Dall, 261.
 Chamelea Mörch, Dall, 261.
 Champosaurus Cope, Osborn, 948.
 Chara springeri n. sp., Knowlton, 699.
 Cheirodus orbicularis (Newberry and Worthen), Eastman, 337.
 Chicoreus Montfort, Arnold, 38.
 Chiloceras sp., Clarke, 200.
 Chione Megerle, Arnold, 38.
 Chione Megerle von Mühlfeld, Dall, 261.
 section Chamelea Mörch, Dall, 261.
 section Chione s. s., Dall, 261.
 section Clausinella Gray, Dall, 261.
 section Gomphina Mörch s. s., Dall, 261.
 section Liophora Conrad, Dall, 261.
 section Macridiscus Dall, Dall, 261.
 section Timoclea Brown, Dall, 261.
 ? section Volupia Defrance, Dall, 261.
 subgenus Gomphina Mörch, Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Chione (Liophora) alveata Conrad, Dall, 261.
 (Liophora) ballista n. sp., Dall, 261.
 (Liophora) burnsii Dall, Dall, 261.
 cancellata Linné, Dall, 261.
 chipolana n. sp., Dall, 261.
 corticaria Rogers, Dall, 261.
 (?Chamelea) craspedonia n. sp., Dall, 261.
 cribraria Conrad, Dall, 261.
 erosa n. sp., Dall, 261.
 (Liophora) glyptocyma n. sp., Dall, 261.
 (Timoclea) grus Holmes, Dall, 261.
 (Liophora) hendersonii n. sp., Dall, 261.
 (Liophora) latilirata Conrad, Dall, 261.
 (Liophora) mactropsis Conrad, Dall, 261.
 (Chamelea) nuciformis Heilprin, Dall, 261.
 (Chamelea) rhodia n. sp., Dall, 261.
 (Chamelea) spada n. sp., Dall, 261.
 (Liophora) ulocyma Dall, Dall, 261.
 (Liophora) victoria n. sp., Conrad, 261.
 (Liophora) xesta n. sp., Dall, 261.
 sp. indet., Dall, 261.
 Chionella Cossmann, Dall, 261.
 Chiton? sp., Weller, 1291.
 Chlamys Bolten, Arnold, 38.
 Chlidonophora Dall, Dall, 261.
 Chlorostoma Swainson, Arnold, 38.
 aureotinctum Forbes, Arnold, 38.
 brunneum Philippi, Arnold, 38.
 funebre A. Adams, Arnold, 38.
 funebre A. Adams, var. subapertum Carpenter, Arnold, 38.
 gallina Forbes, Arnold, 38.
 montereyi Kiener, Arnold, 38.
 (Omphalius) viridulum var. ligulatum Menke, Arnold, 38.
 Choffaticeras n. gen., Hyatt, 625.
 Chomatodus inconstans St. John and Worthen, Eastman, 337.
 Chonetes arcuatus Hall, Weller, 1291.
 coronatus (Con.)?, Weller, 1291.
 flemingi Norwood and Pratten, Girty, 455.
 flemingi var. verneuillanus Norwood and Pratten, Girty, 455.
 geinitzianus Waagen, Girty, 455.
 glaber Geinitz, Beede, 64.
 granulifer Owen, Beede, 64.
 granulifer Owen, Girty, 455.
 hudsonica Clarke, Weller, 1291.
 illinoisensis Worthen, Girty, 455.
 jerseyensis Weller, Schuchert, 1089.
 jerseyensis Weller, Weller, 1291.
 mesolobus Norwood and Pratten, Beede, 64.
 mesolobus Norwood and Pratten, Girty, 455.
 verneuillanus Norwood and Pratten, Beede, 64.
 sp. undet., Weller, 1291.
 Chonophyllum pygmaum n. sp., Greene, 482.
 Chonostrophia complanata (Hall), Weller, 1291.
 jervensis Schuchert, Weller, 1291.
 Chorus Gray, Arnold, 38.
 belcheri Hinds, Arnold, 38.
 Chrysallida Carpenter, Arnold, 38.

Paleontology—Continued.

Genera and species described—Continued.

- Chrysodomus* Swainson, Arnold, 38.
rectirostris Carpenter, Arnold, 38.
tabulatus Baird, Arnold, 38.
 sp. indet., Arnold, 38.
- Cidaroblastus* Hambach, 498.
parvus n. sp., Hambach, 498.
- Cimoliasaurus* Leidy, Williston, 1325.
snowii Williston, Williston, 1325.
- Cimolichthys* Leidy, Loomis, 808.
contracta Cope, Loomis, 808.
merrillii Cope, Loomis, 808.
nepæolica Cope, Loomis, 808.
semianiceps Cope, Loomis, 808.
- Circe* Schumacher, Dall, 261.
- Circenita* Jousseau, Dall, 261.
- Circumphalus* Mörch, Dall, 261.
- Cladochonus?* *bennetti* Beede, Beede, 64.
- Cladodus* Agassiz, Claypole, 206.
clarki Claypole, Claypole, 206.
fyleri Newberry, Claypole, 206.
kepleri Newberry, Claypole, 206.
knightsianus (Cope), Eastman, 337.
occidentalis Leidy, Eastman, 337.
rivi-petrosi Claypole, Claypole, 206.
sinuatus Claypole, Claypole, 206.
- Cladopora* *multi-pora* Hall, Clarke and Ruedemann, 204.
multiseriata n. sp., Weller, 1291.
rectilineata Simpson, Weller, 1291.
 sp., Girty, 455.
- Clathrodictyum ostiolatum* Nicholson, Clarke and Ruedemann, 204.
- Clathurella* Carpenter, Arnold, 38.
- Clavæblastus*, Hambach, 498.
- Clavilithes columbaris* n. sp., Aldrich, 16.
- Clausina* Brown, Dall, 261.
- Clausinella* Gray, Dall, 261.
- Cleiothyris orbicularis* McChesney, Girty, 455.
- Cleiothyris roissyi* (L'Eveille), Beede, 64.
- Clementia* Gray, Dall, 261.
- Clementia grayi* Dall, 261.
- Clementia inoceriformis* Wagner, Dall, 261.
- Clemmys hesperia* n. sp., Hay, 516.
- Clemmys saxea* n. sp., Hay, 516.
- Clepsydras natalis*, Case, 176.
- Clidiophora* Carpenter, Arnold, 38.
- Clidiophora* Carpenter, Dall, 261.
punctata Conrad, Arnold, 38.
- Clidophorus neglectus* Hall, Weller, 1291.
- Climacograptus phyllophorus* Gurley, Weller, 1291.
- Climactichnites*, Woodworth, 1351.
- Clintonia oblongifolia* n. sp., Penhallow, 967.
- Clypidella bimaculata* Dall, Arnold, 38.
- Callomarginata* Carpenter, Arnold, 38.
- Cochlespirella* n. gen., Casey, 178.
- Cochlodesma Couthouy*, Dall, 261.
- Codakia* Scopoli, Dall, 261.
(Jagonia) chipolana n. sp., Dall, 261.
(Jagonia) erosa n. sp., Dall, 261.
(Jagonia) magnoliana n. sp., Dall, 261.
orbicularis Linné, Dall, 261.
(Jagonia) orbiculata Montagu, Dall, 261.
(Jagonia) pertenera n. sp., Dall, 261.
(Jagonia) speciosa Rogers, Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Codakia spinulosa* n. sp., Dall, 261.
(Jagonia) textilis Guppy, Dall, 261.
(Jagonia) vendryesi n. sp., Dall, 261.
(Jagonia) sp. indet., Dall, 261.
- CoGaster* Maceoy, Hambach, 498.
attenuatus Lyon, Rowley, 481.
- Codonites* Meek and Worthen, Hambach, 498.
- Codonotheca caduca* n. gen. and sp., Sellards, 1096.
- Cœlacanthus exiguus* Eastman, Eastman, 337.
- Cœlidium* nom. nov., Clarke and Ruedemann, 204.
macrospira Hall (sp.), Clarke and Ruedemann, 204.
 cf. *vitellia* Billings, Clarke and Ruedemann, 204.
- Cœlocystis* n. gen., Schuchert, 1091.
- Cœlodon* Carpenter, Dall, 261.
- Cœlodus brownii* Cope, Williston, 1330.
stantoni n. sp., Williston, 1330.
- Cœloma bicarinatum* n. sp., Ravn, 996.
- Cœnograptus gracilis* (Hall), Weller, 1291.
- Coilopoceras* n. gen., Hyatt, 625.
colleti n. sp., Hyatt, 625.
novimexicanum n. sp., Hyatt, 625.
springeri n. sp., Hyatt, 625.
- Columbella* Lamarek, Arnold, 38.
(Astyris) californiana Gaskoin, Arnold, 38.
(Æsopus) chrysalloidea Carpenter, Arnold, 38.
(Astyris) gausapata Gould, Arnold, 38.
(Astyris) gausapata Gould, var. *carinata* Hinds, Arnold, 38.
(Anachlis) minima n. sp., Arnold, 38.
(Æsopus) oldroydi n. sp., Arnold, 38.
solidula Reeve, var. *præcursor* n. var. Arnold, 38.
(Astyris) tuberosa Carpenter, Arnold, 38.
- Columnaria alveolata* Goldfuss, Hayes and Ulrich, 533.
halli Nicholson, Hayes and Ulrich, 533.
- Condylocardia* Bernard, Dall, 261.
- Confervites dubius* n. sp., Berry, 75.
- Conocardium eboraceum* Hall, mut. pygmæum nov., Loomis, 809.
gowandense n. sp., Clarke, 200.
parrishi Worthen, Beede, 64.
 sp., Clarke and Ruedemann, 204.
 sp., Girty, 455.
 sp. undet., Weller, 1291.
- Constellaria florida* var. *emaciata* Ulrich and Bassler, Hayes and Ulrich, 533.
teres Ulrich and Bassler, Hayes and Ulrich, 533.
- Conularia crustula* White?, Girty, 455.
trentonensis Hall, Weller, 1291.
- Conus* Linné, Arnold, 38.
californicus Hinds, Arnold, 38.
scopularis n. sp., Casey, 178.
waltonensis n. sp., Aldrich, 17.
- Cooperella* Carpenter, Arnold, 38.
subdiaphana Carpenter, Arnold, 38.
- Coralliophaga coralliophaga* Gmelin, Dall, 261.
elegantula Dall, Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Coralliophila H. and A. Adams, Arnold, 38.
 nux Reeve, Arnold, 38.
- Corax curvatus n. sp., Williston, 1330.
 falcatus Agassiz, Williston, 1330.
- Corbicula Megerle, Dall, 261.
 section Corbiculina Dall, Dall, 261.
 section Cyrenodonax Dall, Dall, 261.
 section Tellinocyclus Dall, Dall, 261.
 section Veloritina Meek, Dall, 261.
 densata Conrad, Dall, 261.
- Corbiculina Dall, Dall, 261.
- Corbis Cuvier, Dall, 261.
 claihornensis Dall, Dall, 261.
 undata Conrad, Dall, 261.
- Corbula (Bruguière) Lamarck, Arnold, 38.
 laqueata n. sp., Casey, 178.
 luteola Carpenter, Arnold, 38.
 nematophora var. fitchi n. var., Johnson, 647.
- Corneocyclus (Ferussac), Dall, 261.
 section Corneocyclus s. s., Dall, 261.
 section Cyclocalyx Dall, Dall, 261.
 section Phymesoda Rafinesque, Dall, 261.
 section Pisidium C. Pfeiffer, Dall, 261.
- Cornulites arcuatus Conrad, Clarke and Ruedemann, 204.
 cingulatus Hall, Weller, 1291.
 sp. undet., Weller, 1291.
- Corynoides calicularis Nich., Weller, 1291.
- Cosmannella Mayer Eymar, Dall, 261.
- Cranæna subelliptica var. hardingensis n. var., Girty, 455.
- Crania? columbiana Walcott, Matthew, 857.
 modesta White and St. John, Beede, 64.
 sp., Clarke and Ruedemann, 204.
 sp. undet., Weller, 1291.
- Crassinella Bayle, Arnold, 38.
- Crassinella Guppy, Dall, 261.
- Crassatellites Krüger, Dall, 261.
 section Crassatellites s. s., Dall, 261.
 section Scambula Conrad, Dall, 261.
 (Crassinella) acutus n. sp., Dall, 261.
 (Crassinella) bowdenensis n. sp., Dall, 261.
 (Scambula) chipolanus n. sp.?, Dall, 261.
 clarkensis Dall, Dall, 261.
 (Scambula) deformis Heilprin, Dall, 261.
 (Scambula) densus Dall, Dall, 261.
 (Crassinella) duplinianus n. sp., Dall, 261.
 (Crassinella) galvestonensis, Harris, Dall, 261.
 (Scambula) gibbesii Tuomey and Holmes, Dall, 261.
 (Scambula) jamaicensis n. sp., Dall, 261.
 (Crassinella) lunulatus Conrad, Dall, 261.
 (Scambula) marylandicus Conrad, Dall, 261.
 (Scambula) melinus Conrad var. meridionalis Dall, Dall, 261.
 (Micromeris) minutissimus Lea, Dall, 261.
 (Cuna) parvus Lea, Dall, 261.
 (Scambula) psychopterus Dall, Dall, 261.
 (Crassinella) tanicus n. sp., Dall, 261.
 (Crassinella) triangulatus n. sp., Dall, 261.
 undulatus var. cyclopterus Dall, Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Crenimargo, Cossmann, Dall, 261.
- Crenipecten hallanus Walcott, Girty, 455.
- Creosaurus, Osborn, 947.
- Crepidula Lamarck, Arnold, 38.
 aculeata Gmelin, Arnold, 38.
 adunca Sowerby, Arnold, 38.
 dorsata Broderip, Arnold, 38.
 grandis Middendorff, Arnold, 38.
 navicelloides Nuttall, Arnold, 38.
 onyx Sowerby, Arnold, 38.
 rugosa Nuttall, Arnold, 38.
- Crioblastus, Hambach, 498.
 incisus n. sp., Hambach, 498.
 schucherti n. sp., Hambach, 498.
 tenuis n. sp., Hambach, 498.
 tenuistriatus n. sp., Hambach, 498.
 verrucosus n. sp., Hambach, 498.
- Crucibulum Schumacher, Arnold, 38.
 spinosum, Sowerby, Arnold, 38.
- Cryphaeus boothi var. calliteles Green, Loomis, 809.
- Cryptochiton Midd. & Gray, Arnold, 38.
 stelleri Middendorff, Arnold, 38.
- Cryptodon efr. unicarinatus Nyst. sp., Ravn, 996.
- Cryptomya Conrad, Arnold, 38.
 californica Conrad, Arnold, 38.
- Cryptonatica Dall, Arnold, 38.
- Ctenacanthus amblyxiphas Cope, Eastman, 337.
- Ctenichnites bisulcatus n. sp., Matthew, 858.
- Ctenodonta jerseyensis n. sp., Weller, 1291.
 levata (Hall), Weller, 1291.
 nasuta (Hall), Weller, 1291.
 subrotunda Ulrich, Hayes and Ulrich, 533.
- Ctenopteris columbiensis n. sp., Penhallow, 967.
- Ctenoptychius occidentalis (St. John and Worthen), Eastman, 337.
- Ctenopyge pecten Salter, Matthew, 858.
- Cucullæa truncata? Gabb, var., Whiteaves, 1308.
- Cucullæa sp., Shattuck, 1098.
- Cumingia Sowerby, Arnold, 38.
 californica Conrad, Arnold, 38.
- Cuna Hedley, Dall, 261.
- Cuncameya truncatula Ulr., Weller, 1291.
- Cunninghamites squamosus Heer, Berry, 76.
- Cupressoxylon dawsoni n. sp., Penhallow, 968.
- Cursipes n. gen., Matthew, 859.
 dawsoni n. sp., Matthew, 859.
- Cuspidaria Nardo, Dall, 261.
 (Cardiomya) craspedonia n. sp., Dall, 261.
 (Bowdenia) distira n. sp., Dall, 261.
 (Cardiomya) ornatissima Orbiguy, Dall, 261.
 suciensis n. sp., Whiteaves, 1308.
- Cyanocyclus Ferussac, Dall, 261.
- Cyathodonta Conrad, Dall, 261.
 guadalupensis n. sp., Dall, 261.
 semirugosa Reeve, Dall, 261.
 spenceri n. sp., Dall, 261.
 vicksburgiana n. sp., Dall, 261.
- Cycadites sp., Penhallow, 967.

Paleontology—Continued.*Genera and species described—Continued*

- Cyclas* (Bruguère) Link, Dall, 261.
Cyclina Deshayes, Dall, 261.
Cyclinella Dall, Dall, 261.
 cyclica Guppy, Dall, 261.
 gatunensis n. sp., Dall, 261.
 tenuis Récluz, Dall, 261.
Cyclocalyx Dall, Dall, 261.
Cyclocardia Conrad, Dall, 261.
Cyclonema montrealensis Bill., Weller, 1291.
 varicosum Hall, Hayes and Ulrich, 533.
Cyclotrypa Ulrich, Condra, 238.
 ? *barberi* Ulrich, Condra, 238.
Cylichna Loven, Arnold, 38.
 alba Brown, Arnold, 38.
 costata Gabb, Whiteaves, 1308.
Cylindrodon fontis Douglas, Matthew, 863.
Cymatocyclus Dall, Dall, 261.
Cymbophora ashburneri Gabb, Whiteaves, 1308.
Cynodiectis paterculus n. sp., Matthew, 863.
Cynognathus, Case, 176.
Cyphaspis trentonensis n. sp., Weller, 1291.
Cypræa Linné, Arnold, 38.
 nuculoides n. sp., Aldrich, 16.
 spadicea Gray, Arnold, 38.
 suciensis Whiteaves, Whiteaves, 1308.
 sp., Shattuck, 1098.
Cypricardinia? *carbonaria* Meek, Beede, 64.
 carbonaria Meek, Girty, 455.
 sublamellosa Hall, Weller, 1291.
Cyprimeria Conrad, Dall, 261.
 lens Whiteaves, Whiteaves, 1308.
 ? *sulcata* n. sp., Johnson, 647.
Cyprina? *anthracicola* n. sp., Whiteaves, 1308.
 denmanensis n. sp., Whiteaves, 1308.
 sp., Ravn, 996.
Cyrena Lamarck, Dall, 261.
 section *Cyrena* s. s., Dall, 261.
 section *Egetaria* Möhrh, Dall, 261.
 section *Geloina* Gray, Dall, 261.
 section *Isodoma* (Deshayes) Cossmann, Dall, 261.
 section *Polymesoda* Rafinesque, Dall, 261.
 albertensis n. sp., Whiteaves, 1302.
 (*Pseudocyrena*) *dupliniana* n. sp., Dall, 261.
 (*Pseudocyrena*) *floridana* Conrad, Dall, 261.
 gravesi Deshayes, Ravn, 996.
 pompholyx Dall, 261.
Cyrenastrum Bourguignat, Dall, 261.
Cyrenodonax Dall, Dall, 261.
Cyrenoida Joannis, Dall, 261.
 caloosacensis Dall, Dall, 261.
Cyrtina hamiltonensis Hall, Weller, 1291.
 hamiltonensis Hall, mut. *pygmæa* nov., Loomis, 809.
 magnaplicata n. sp., Weller, 1291.
 rostrata Hall, Weller, 1291.
 varia Clarke, Weller, 1291.
 sp. undet., Weller, 1291.
Cyrtoceras arcticameratum Hall, Clarke and Ruedemann, 204.
 bovinum n. sp., Clarke and Ruedemann, 204.

Paleontology—Continued.*Genera and species described—Continued.*

- Cyrtoceras* cf. *brevicorne* Hall, Clarke and Ruedemann, 204.
 gracilis n. sp., Cleland, 208.
 orodes Billings, Clarke and Ruedemann, 204.
 sp. undet., Weller, 1291.
Cyrtodonta billingsi Ulr., Weller, 1291.
 canadensis Bill., Weller, 1291.
Cyrtolites ornatus var. *minor* U. & S., Weller, 1291.
 sinuatus H. & W., Weller, 1291.
Cyrtoneilla mitella Hall, Weller, 1291.
Cyrtorhizoceras curvicameratum n. sp., Clarke and Ruedemann, 204.
Cystodictya Ulrich, Condra, 238.
 anisopora Condra, Condra, 238.
 inequmarginata Rogers, Condra, 238.
 lophodes Condra, Condra, 238.
Cythara Schumacher, Arnold, 38.
Cytherea Bolten, Dall, 261.
 section *Antigona* s. s., Dall, 261.
 section *Artena* Conrad, Dall, 261.
 section *Clausina* Brown, Dall, 261.
 section *Ventricola* Römer, Dall, 261.
 casarina n. sp., Dall, 261.
 (*Ventricola*) *blandiana* Guppy, Dall, 261.
 (*Artena*) *glyptoconcha* n. sp., Dall, 261.
 (*Artena*) *shepardi* n. sp., Dall, 261.
 (*Artena*) *staminea* Conrad, Dall, 261.
 tarquinia Dall, Dall, 261.
 (*Ventricola*) *ucuttana* n. sp., Dall, 261.
 (*Artena*) *undulata* Conrad, Dall, 261.
 willeoxi n. sp., Dall, 261.
Dalmanites sp. cf. *anchiops* (Green), Weller, 1291.
 aspinosa n. sp., Weller, 1291.
 dentatus Barrett, Weller, 1291.
 pleurotyx (Green), Weller, 1291.
 sp. undet., Weller, 1291.
 electra (Bill.), Weller, 1291.
Dalmanella cf. *elegantula* Dalman (sp.), Clarke and Ruedemann, 204.
 cf. *hybrida* Sowerby (sp.), Clarke and Ruedemann, 204.
 perlegans (Hall), Weller, 1291.
 postelegantula n. sp., Weller, 1291.
 subæquata (Con.), Weller, 1291.
 subcarinata (Hall), Weller, 1291.
 testudinaria (Dal.), Weller, 1291.
 wemplei Cleland, Weller, 1291.
Dammara cliffwoodensis Hollick, Berry, 76.
Dawsonoceras annulatum Sowerby var. *americanum* Foord, Clarke and Ruedemann, 204.
Delphinoidea Brown, Arnold, 38.
 coronadoensis n. sp., Arnold, 38.
Deltodus angularis Newberry and Worthen, Eastman, 337.
 contortus (St. John and Worthen), Eastman, 337.
 costatus (Newberry and Worthen), Eastman, 337.
 occidentalis (Leidy), Eastman, 337.
 spatulatus Newberry and Worthen, Eastman, 337.

Paleontology—Continued.

Genera and species described—Continued.

- Dentalium Linné, Arnold, 38.
 hexagonum Sowerby, Arnold, 38.
 indianorum Carpenter, Arnold, 38.
 opaculum n. sp., Casey, 178.
 polygonum n. sp., Casey, 178.
 pseudo-hexagonum Dall, Arnold, 38.
 semipolium Broderip and Sowerby, Arnold, 38.
 strenuum n. sp., Casey, 178.
 sublaeve Hall, Girty, 455.
 zephyrinum n. sp., Casey, 178.
 sp., Girty, 455.
- Derbya Waagen, Beede, 64.
 bennetti Hall and Clarke, Beede, 64.
 crassa (Meek and Hayden), Beede, 64.
 crassa Meek and Hayden, Girty, 455.
 cymbula Hall and Clarke, Beede, 64.
 keokuk (Hall), Beede, 64.
- Desmoceras selwynianum Whiteaves, Whiteaves, 1308.
- Dewalquca groenlandica Heer, Berry, 76.
- Diaphorostoma lineatum Conrad, mut. belial Clarke, Loomis, 809.
- Diaphorostoma niagarensis Hall (sp.), Clarke and Ruedemann, 204.
 pugnus n. sp., Clarke, 200.
 (Naticopsis) rotundatum n. sp., Clarke, 200.
- Diatostoma Deshayes, Arnold, 38.
 sp. indet., Arnold, 38.
- Diatryma gigantea, Lucas, 814.
- Dichoerinus inornatus Wachsmuth and Springer, Grabau, 464.
- Dicranograptus ramosus (Hall), Weller, 1291.
- Dielasma bovidens (Morton), Beede, 64.
 bovidens Morton ?, Girty, 455.
- Digitaria Wood, Dall, 261.
- Dikelocephalus newtonensis n. sp., Weller, 1291.
- Dimetrodon, Sternberg, 1176.
- Dimorphoceras Hyatt, Smith, 1137.
 texanum n. sp., Smith, 1137.
- Dinocyon ossifragus n. sp., Douglass, 317.
- Dinorthis pectinella (Emm.), Weller, 1291.
 subquadrata (Hall), Hayes and Ulrich, 533.
- Diopeus leptoccephalus, Case, 176.
- Diphyphyllum billingsi n. sp., Greene, 480.
 integumentum Barrett, Weller, 1291.
- Diplodocus, Hatcher, 508.
- Diplodonta Brown, Arnold, 38.
 orbella Gould, Arnold, 38.
 serricata Reeve, Arnold, 38.
- Diplograptus angustifolius (Hall), Weller, 1291.
 foliaceus (Murch.), Weller, 1291.
- Diploceras notable n. sp., Whiteaves, 1308.
- Diplophyllum caespitosum Hall, Clarke and Ruedemann, 204.
- Discinella lugubris Conrad, Dall, 261.
- Discosaurus Leidy, Williston, 1325.
- Ditypodon Sandberger, Dall, 261.
- Divaricella von Martens, Dall, 261.
 section Bourdota Dall, Dall, 261.
 section Divaricella s. s., Dall, 261.
 section Pompholigina Dall, Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Divaricella chipolana n. sp., Dall, 261.
 compsa n. sp., Dall, 261.
 dentata Wood, Dall, 261.
 quadrilecata Orbigny, Dall, 261.
- Dolotocrinus amplius ? M. & G., Rowley, 484.
 aplatus M. & G., Rowley, 482.
 arrosus ? M. & G., Rowley, 482.
 arrosus var. cognatus n. var., Rowley, 482.
 aspratilis M. & G., Rowley, 480.
 caelatus M. & G., Rowley, 485.
 charlestownensis M. & G., Rowley, 484.
 corbuliformis n. sp., Rowley, 484.
 corporosus ? M. & G., Rowley, 485.
 corporosus var. concinnus n. var., Rowley, 484.
 corporosus var. decoratus n. var., Rowley, 484.
 curriei n. sp., Rowley, 483.
 elegantulus n. sp., Rowley, 484.
 excavatus W. & S., Rowley, 482.
 excavatus ? W. & S., Rowley, 483.
 excavatus var. incarinatus n. var., Rowley, 481.
 fungiferus n. sp., Rowley, 482.
 greenei M. & G., Rowley, 485.
 marshi Lyon, Rowley, 485.
 multibrachiatus n. sp., Rowley, 483.
 multinodosus n. sp., Rowley, 484.
 nodosus M. & G., Rowley, 485.
 noduliferus n. sp., Rowley, 483.
 pernodosus n. sp., Rowley, 481.
 preciosus M. & G., Rowley, 484.
 pulchellus M. & G., Rowley, 480.
 spinosus M. & G., Rowley, 485.
 springeri n. sp., Rowley, 482.
 venustus M. & G., Rowley, 485.
 welleri n. sp., Rowley, 483.
 sp.?, Rowley, 480.
- Doleropteris pennsylvanica Dn. sp., White, 1296.
- Dolichorhynchops Williston, Williston, 1325.
 osborni Williston, Williston, 1325.
- Dolichotoma Bellardi, Arnold, 38.
- Donacopsis Sandberger, Dall, 261.
- Donax (Linné) Lannarek, Arnold, 38.
 californica Conrad, Arnold, 38.
 laevigata Deshayes, Arnold, 38.
 sp., Ravn, 996.
- Dosinia Scopoli, Arnold, 38.
- Dosinia Scopoli, Dall, 261.
- Dosinia s. s., Dall, 261.
 section Austrodosinia Dall, Dall, 261.
 section Dosinia s. s., Dall, 261.
 section Dosinidia Dall, Dall, 261.
 section Dosinisa Dall, Dall, 261.
 section Dosinorbis Dall, Dall, 261.
 section Orbiculus Megerle, Dall, 261.
 (Dosinidia) acetabulum Conrad, Dall, 261.
 (Dosinidia) chipolana n. sp., Dall, 261.
 (Dosinidia) concentrica Born., Dall, 261.
 (Dosinidia) discus Reeve, Dall, 261.
 (Dosinidia) elegans Conrad, Dall, 261.
 (Dosinidia) ligona n. sp., Dall, 261.
 ponderosa Gray, Arnold, 38.
 (Dosinidia) ponderosa Gray, Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Dosinidia Dall, Dall, 261.
 Dosiniopsis Conrad, Dall, 261.
 Dosinisca Dall, Dall, 261.
 Dosinorbis Dall, Dall, 261.
 Drillia Gray, Arnold, 38.
 cancellata Carpenter, Arnold, 38.
 harmonica n. sp., Casey, 178.
 hemphilli Stearns, Arnold, 38.
 incisa Carpenter, Arnold, 38.
 inermis Hinds, Arnold, 38.
 inermis var. penicillata Carpenter, Arnold, 38.
 johnsoni n. sp., Arnold, 38.
 merriami n. sp., Arnold, 38.
 montereyensis Stearns, Arnold, 38.
 pudica Hinds, Arnold, 38.
 renaudi n. sp., Arnold, 38.
 torosa Carpenter, Arnold, 38.
 Dromopus eeler, n. sp., Matthew, 861.
 Dryptosaurus inerassatus (Cope), Lambe, 751.
 Dystactospongia minor Ulrich, Hayes and Ulrich, 533.
 Eatonia medialis (Van.), Weller, 1291.
 peculiaris (Con.), Weller, 1291.
 singularis (Van.), Weller, 1291.
 Ecyliomphalus contiguus Ulrich, Weller, 1291.
 subelliptica n. sp., Weller, 1291.
 trentonensis (Conrad), Weller, 1291.
 Echinarachnius Leske, Arnold, 38.
 Echinochama Fischer, Dall, 261.
 antiquata n. sp., Dall, 261.
 arcinella Linné, Dall, 261.
 Edaphosaurus pogonias, Case, 176.
 Edmondia (?) areolata n. sp., Cleland, 208.
 aspinwallensis Meek, Beede, 64.
 ? deckerensis n. sp., Weller, 1291.
 gibbosa Geinitz, Girty, 455.
 mortoneus Geinitz ?, Girty, 455.
 nebrascensis (Geinitz), Beede, 64.
 subtruncata Meek, Girty, 455.
 ? sp., Girty, 455.
 Edriocrinus sacculus Hall, Weller, 1291.
 Egeria Roissy, Dall, 261.
 section Egeria s. s., Dall, 261.
 section Profischeria Dall, Dall, 261.
 paradoxa (Born.), Dall, 261.
 Elasmatium n. gen., Clarke, 200.
 gowandense n. sp., Clarke, 200.
 Elasmosaurus Cope, Williston, 1325.
 Eleutheroblastus Hambach, 498.
 Eleutheroerinus casedayi Y. & S., Rowley, 485.
 Elonichthys disjunctus n. sp., Eastman, 337.
 perpennatus Eastman, Eastman, 337.
 Embaphias Cope, Williston, 1325.
 Embolophorus dollovisianus Cope, Case, 174, 175.
 Empo Cope, Hay, 517.
 Empo Cope, Stewart, 1186.
 contracta Cope, Stewart, 1186.
 lisbonensis Stewart, Stewart, 1186.
 nepæolica Cope, Hay, 517.
 nepæolica Cope, Stewart, 1186.
 semianiceps (Cope), Stewart, 1186.
 Enchodus Agassiz, Hay, 517.

Paleontology—Continued.

Genera and species described—Continued.

- Enchodus Agassiz, Loomis, 808.
 Enchodus Agassiz, Stewart, 1186.
 amierodus Stewart, Loomis, 808.
 amierodus Stewart, Stewart, 1186.
 dirus (Leidy), Stewart, 1186.
 dolichus Cope, Hay, 517.
 dolichus Cope, Loomis, 808.
 dolichus Cope, Stewart, 1186.
 ferox Leidy, Hay, 517.
 gladiolus Cope, Hay, 517.
 parvus Stewart, Stewart, 1186.
 petrosus Cope, Hay, 517.
 petrosus Cope, Loomis, 808.
 petrosus Cope, Stewart, 1186.
 sævus n. sp., Hay, 517.
 shumardi Leidy, Loomis, 808.
 shumardi Leidy, Stewart, 1186.
 tetraëcus Cope, Hay, 517.
 sp., Stewart, 1186.
 Enchostoma sp., Girty, 455.
 Eneriurus trentonensis Walc., Weller, 1291.
 tuberculosis n. sp., Collie, 228.
 Enerinus liliiformis, Grabau, 464.
 Endoceras uddeni (Cragin), Hyatt, 625.
 Endocostea brooksi n. sp., Johnson, 647.
 Endopachys Lonsdale, Vaughan, 1243.
 Engonoceras Neumayr, Hyatt, 625.
 belviderense (Cragin), Hyatt, 625.
 complicatum n. sp., Hyatt, 625.
 gibbosum n. sp., Hyatt, 625.
 pierdenale (von Buch), Hyatt, 625.
 pierdenale var. commune, Hyatt, 625.
 roemeri (Cragin), Hyatt, 625.
 serpentinum (Cragin), Hyatt, 625.
 stolleyi Böhm, Hyatt, 625.
 subjectum n. sp., Hyatt, 625.
 Euoploclytia minor Woodward, Whiteaves, 1308.
 Euteletes hemiplicata (Hall), Beede, 64.
 hemiplicatus Hall, Girty, 455.
 Enterolasma cf. caliculus Hall (sp.), Clarke and Ruedemann, 204.
 Entodesma Philippi, Dall, 261.
 Entolium aviculatum (Swallow), Beede, 64.
 Entomis prosephina nov., Loomis, 809.
 serratostrata Sandberger, Clarke, 200.
 variostrata Clarke, Clarke, 200.
 Eoobolus n. subg., Matthew, 858.
 Eotomaria areyi n. sp., Clarke and Ruedemann, 204.
 durhamensis Whiteaves (sp.), Clarke and Ruedemann, 204.
 galtensis Billings (sp.), Clarke and Ruedemann, 204.
 kayseri n. sp., Clarke and Ruedemann, 204.
 Epilucina Dall, Dall, 261.
 Epiphragmophora Strobel, Arnold, 38.
 Equisetum areticum Heer, Penhallow, 967.
 Erato Risso, Arnold, 38.
 columbella Menke, Arnold, 38.
 Eridophyllum louisvillensis n. sp., Greene, 480.
 Eriphyla Gabb, Dall, 261.
 Erismacanthus barbatus n. sp., Eastman, 337.

Paleontology—Continued.

Genera and species described—Continued.

- Erismacanthus formosus* Eastman, Eastman, 337.
maceoyanus St. John and Worthen, Eastman, 337.
Erisocrinus megalobraehius Beede, Beede, 64.
typus Meek and Worthen, Beede, 64.
Erycina sp., Ravn, 996.
Erycinella Conrad, Dall, 261.
 (*Carditopsis*) *bernardi* n. sp., Dall, 261.
 ovalis Conrad, Dall, 261.
Eryma dawsoni Woodward, Whiteaves, 1308.
Eryops, Cope, Case, 175.
 latus n. sp., Case, 175.
 megacephalus, Sternberg, 1176.
Escharopora siluriana n. sp., Weller, 1291.
Escasona, Matthew, 858.
 ? *ingens*, Matthew, 858.
 rutellum, Matthew, 858.
 ? *vetus*, Matthew, 858.
Etoblattina mazona, Sellards, 1095.
 sp., Sellards, 1095.
Eucallista Dall, Dall, 261.
Eucalyptoerinus ovalis Hall, Grabau, 464.
Eucalyptus (?) *dubia* n. sp., Berry, 76.
 geinitzi Heer, Berry, 76.
Euconispira bicarinata McChesney, Girty, 455.
 taggarti Meek, Girty, 455.
 sp., Girty, 455.
Eulima Risso, Arnold, 38.
 falcata Carpenter, Arnold, 38.
 hastata Sowerby, Arnold, 38.
 micans Carpenter, Arnold, 38.
Eulopia Dall, Dall, 261.
Eulophoceras n. gen., Hyatt, 625.
Euloxa Conrad, Dall, 261.
 latisulcata Conrad, Dall, 261.
Eumetria mareyi Shumard ?, Girty, 455.
 woosteri White, Girty, 455.
Eunema cretaceum Whiteaves, Whiteaves, 1308.
Euomphalus catilloides Conrad, Girty, 455.
 fairchildi n. sp., Clarke and Ruedemann, 204.
Eupachyerinus magister Miller and Gurley, Beede, 64.
Eupera Bourguignat, Dall, 261.
Euphemus nodocarinatus Hall, Girty, 455.
 subpapillosus White ?, Girty, 455.
Eupleura H. and A. Adams, Arnold, 38.
 muriceiformis Broderip, Arnold, 38.
 muriceiformis var. *curta* n. var., Arnold, 38.
Eurychilina jerseyensis n. sp., Weller, 1291.
 oculifera n. sp., Weller, 1291.
Eurypterus pittsfordensis n. sp., Sarle, 1070.
Euthydesma Hall, Clarke, 200.
 subtextile Hall, Clarke, 200.
Eutivela Dall, Dall, 261.
Evalea A. Adams, Arnold, 38.
Exogyra clarki n. sp., Shattuck, 1098.
Favosites corrugatus n. sp., Weller, 1291.
 favosus, Hayes and Ulrich, 533.
 forbesi Edwards and Haime, Clarke and Ruedemann, 204.
 gothlandicus Lamarek, Clarke and Ruedemann, 204.

Paleontology—Continued.

Genera and species described—Continued.

- Favosites helderbergiae* Hall, Weller, 1291.
 helderbergiae praeedens, n. var., Schuchert, 1089.
 hisingeri Edwards and Haime, Clarke and Ruedemann, 204.
 niagarensis Hall, Clarke and Ruedemann, 204.
 pyriforme (Hall), Weller, 1291.
Fenestella Lonsdale, Condra, 238.
 binodata Condra, Condra, 238.
 conradi Ulrich, Condra, 238.
 conradi-compactilis Condra, Condra, 238.
 cyclofenestrata Condra, Condra, 238.
 gracilis Condra, Condra, 238.
 kansanensis Rogers, Condra, 238.
 limbata Foerste, Condra, 238.
 mimica Ulrich, Condra, 238.
 parvipora Condra, Condra, 238.
 perelegans Meek, Condra, 238.
 polyporoides Condra, Condra, 238.
 spinulosa Condra, Condra, 238.
 subrudis Condra, Condra, 238.
 tenax Ulrich (?), Condra, 238.
 tenax Ulrich, Hayes and Ulrich, 533.
 cf. *tenax* Ulrich, Girty, 455.
 sp., Girty, 455.
Ficus neurocarpa n. sp., Hollick, 592.
 reticulata (Lesq.) Knowlton, Berry, 76.
 rhamnoides Knowlton, Johnson, 647.
 uncata Lesq., Johnson, 647.
 woolsoni Newb., Berry, 76.
Fissodus St. John and Worthen, Eastman, 337.
 dentatus n. sp., Eastman, 337.
 inaequalis (St. John and Worthen), Eastman, 337.
Fissurella volcano Reeve, Arnold, 38.
Fissuridea Swainson, Arnold, 38.
 aspera Eschscholtz, Arnold, 38.
 inaequalis Sowerby, Arnold, 38.
 infrequens n. sp., Aldrich, 16.
 murina (Carpenter) Dall, Arnold, 38.
Fistulipora McCoy, Condra, 238.
 carbonaria Ulrich, Condra, 238.
 carbonaria Ulrich, Girty, 455.
 carbonaria-nebrascensis Condra, Condra, 238.
 nodulifera Meek, Condra, 238.
Fossarus Philippi, Arnold, 38.
 (*Isapis*) *fenestrata* Carpenter, Arnold, 38.
Fusulina cylindrica Fischer de Waldheim, Girty, 455.
 secalica (Say), Beede, 64.
Fusus Lamarek, Arnold, 38.
 barbarensis Trask, Arnold, 38.
 luteopictus Dall, Arnold, 38.
 mississippiensis Conrad, Casey, 178.
 robustus Trask, Arnold, 38.
 rugosus Trask, Arnold, 38.
 texanus n. sp., Shattuck, 1098.
 vicksburgensis, Casey, 178.
 sp., Ravn, 996.
 sp., Shattuck, 1098.
Gadina Gray, Arnold, 38.
 reticulata Sowerby, Arnold, 38.

Paleontology—Continued.

Genera and species described—Continued.

- Gafrarium* Bolten, Dall, 261.
 section *Circe* Schumacher, Dall, 261.
 section *Circenita* Jousseau, Dall, 261.
 section *Gouldia* C. B. Adams, Dall, 261.
 section *Parmulina* Dall, Dall, 261.
 ? section *Radioerista* Dall, Dall, 261.
 (*Gouldia*) *altum* n. sp., Dall, 261.
 (*Gouldia*) *erosum* n. sp., Dall, 261.
 (*Gouldia*) *metastriatum* Conrad, Dall, 261.
Galerus Humphrey, Arnold, 38.
mammillaris Broderip, Arnold, 38.
Galesaurus, Case, 176.
Gastrioceras Hyatt, Smith, 1137.
branneri Smith, Smith, 1137.
carbonarium von Buch, Smith, 1137.
compressum Hyatt, Smith, 1137.
entogonum Gabb, Smith, 1137.
exelsum Meek, Smith, 1137.
globulosum Meek and Worthen, Smith, 1137.
illinoense Miller and Gurley, Smith, 1137.
kansasense Miller and Gurley, Smith, 1137.
kingi Hall and Whitfield, Smith, 1137.
listeri Martin, Smith, 1137.
montgomeryense Miller and Gurley, Smith, 1137.
nolinense Cox, Smith, 1137.
occidentale Miller and Faber, Smith, 1137.
planorbiforme Shumard, Smith, 1137.
subcavum Miller and Gurley, Smith, 1137.
welleri n. sp., Smith, 1137.
Gastrochaena striatula n. sp., Aldrich, 17.
geinitzia formosa Heer, Berry, 76.
Geloina Gray, Dall, 261.
Gemma Deshayes, Dall, 261.
gemma Totten, Dall, 261.
gemma var. *purpurea* Lea, Dall, 261.
magna n. sp., Dall, 261.
magna var. *virginiana* Dall, Dall, 261.
trigona n. sp., Dall, 261.
Gennaeocrinus comptus n. sp., Rowley, 480.
comptus var. *spiniferus* n. var., Rowley, 480.
facetus n. sp., Rowley, 480.
kentuckiensis ? Shumard ?, Rowley, 480.
sculptus n. sp., Rowley, 480.
Gephyroceras cf. *domanicense* Holzapfel, Clarke, 200.
Gerhardtia n. gen., Hyatt, 625.
Gervillioopsis invaginata (?) White, Shattuck, 1098.
Gillicus Hay, Hay, 517.
Hay, Stewart, 1186.
arcuatus (Cope), Stewart, 1186.
Ginkgo pusilla Dn., Penhallow, 967.
Glans Megerle, Dall, 261.
Gleichenia delicatula Heer, Hollick, 591.
rhombifolia n. sp., Hollick, 591.
saundersii n. sp., Berry, 75.
Globoblastus, Hambach, 498.
magnificus n. sp., Hambach, 498.

Paleontology—Continued.

Genera and species described—Continued.

- Globoblastus ornatus* n. sp., Hambach, 498.
spathatus n. sp., Hambach, 498.
Glossina spatiosa (Hall) ?, Weller, 1291.
Glottidia Dall, Arnold, 38.
albida Hinds, Arnold, 38.
Glycymeris Da Costa, Arnold, 38.
barbarensis Conrad, Arnold, 38.
septentrionalis Middendorf, Arnold, 38.
Glyphæa n. sp., Whiteaves, 1308.
Glyphioceras Hyatt (emend. Haug), Smith, 1137.
calyx Phillips, Smith, 1137.
diadema Goldfuss, Smith, 1137.
 ? *hathawayanum* McChesney, Smith, 1137.
 ? *leviculum* Miller and Faber, Smith, 1137.
pygmaeum Winchell, Smith, 1137.
Glyptocrinus decadactylus Hall, Hayes and Ulrich, 533.
Glyptotherium texanum n. gen. and sp., Osborn, 945.
Gomphina Mörch, Dall, 261.
Gomphognathus, Case, 176.
Goniatites de Haan, Smith, 1137.
choctawensis Shumard, Smith, 1137.
 ? *colubrellus* Morton, Smith, 1137.
grenstria Phillips, Smith, 1137.
greencastleensis Miller and Gurley, Smith, 1137.
kentuckiensis Miller, Smith, 1137.
lunatus Miller and Gurley, Smith, 1137.
 ? *minimus* Shumard, Smith, 1137.
newsomi n. sp., Smith, 1137.
 ? *parvus* Shumard, Smith, 1137.
 ? *politus* Shumard, Smith, 1137.
sphaericus Martin, Smith, 1137.
striatus Sowerby, Smith, 1137.
subcircularis Miller, Smith, 1137.
Goniobasis ? *ortmanni* n. sp., Stanton, 1166.
 ? *silberlingi* n. sp., Stanton, 1166.
Gonilia Stoliczka, Dall, 261.
Gonioloboceras ? *allei* Winchell, Smith, 1137.
goniolum Meek, Smith, 1137.
 ? *limatum* Miller and Faber, Smith, 1137.
welleri n. sp., Smith, 1137.
Goniophora carinatus (Hall), Weller, 1291.
 sp. undet., Weller, 1291.
Goodallia Turton, Dall, 261.
Gouldia C. B. Adams, Dall, 261.
Gradiucina Cossmann, Dall, 261.
Grammysia constricta Hall, mut. *pygmæa* nov., Loomis, 809.
 sp. undet., Weller, 1291.
Gratolopia Desmoulins, Dall, 261.
 (*Cytheriopsis*) *alumensis* n. sp., Dall, 261.
Granatoerinites mihi, n. gen., Troost, Hambach, 498.
cidariformis mihi, Troost, Hambach, 498.
globosus mihi, Troost, Hambach, 498.
Gresslyia abducta Phillips sp., Madsen, 836.
gregaria (Zieten) Goldfuss sp., Madsen, 836.
peregrina Phillips sp., Madsen, 836.
Gryphaea mucronata Gabb, Shattuck, 1098.
vesicularis Lanarek, Whiteaves, 1308.
Gymnoptychus minimus n. sp., Matthew, 863.
 minor (Douglas), Matthew, 863.

Paleontology—Continued.

Genera and species described—Continued.

- Gypidula angulata n. sp., Weller, 1291.
 galeata (Dal.), Weller, 1291.
 galeata (Dal.) var., Weller, 1291.
 Gyroceras farcinum n. sp., Clarke and Ruedemann, 204.
 Gyrodes (conradiana? Gabb, var.) canadensis, Whiteaves, 1308.
 Hadrocrinus plenissimus Lyon, Rowley, 485.
 Haliotis Linné, Arnold, 38.
 fulgens Philippi, Arnold, 38.
 Halonympha Dall and Smith, Dall, 261.
 Halysites agglomeratus Hall (sp.), Clarke and Ruedemann, 204.
 agglomeratus Hall, Whitfield, 1310.
 catenulatus, Hayes and Ulrich, 533.
 catenularia (Linn.), Weller, 1291.
 catenulatus Linn., Whitfield, 1310.
 catenularius Linne (sp.), Clarke and Ruedemann, 204.
 radiatus n. sp., Whitfield, 1310.
 Haminea Leach, Arnold, 38.
 virescens Sowerby, Arnold, 38.
 obstrictus Jimbo, Whiteaves, 1308.
 Haplocanthosaurus, Hatcher, 507.
 prisceus, Hatcher, 507.
 utterbachi n. sp., Hatcher, 507.
 Haplocanthus prisceus n. gen. and sp., Hatcher, 511.
 Hargeria n. gen., Lucas, 814.
 gracilis, Lucas, 814.
 Harpagodes shumardi (Hill), Shattuck, 1098.
 Harpina ottawensis (Bill.), Weller, 1291.
 Harrisia parabola Cleland, Cleland, 208.
 Haucriceras gardeni (Baily), Whiteaves, 1308.
 Hebertella borealis Billings, Hayes and Ulrich, 533.
 sinuata Hall, Hayes and Ulrich, 533.
 Helecion giganteus? var. vancouverensis, Whiteaves, 1308.
 tenuicostatus n. sp., Whiteaves, 1308.
 Helicoceras pariense White?, Johnson, 647.
 Heliophyllum conglomeratum n. sp., Greene, 484.
 congregatum n. sp., Greene, 484.
 convergens (Hall), Greene, 483.
 crotalum n. sp., Greene, 481.
 dispansum n. sp., Greene, 481.
 mirum n. sp., Greene, 481.
 vesiculatum (Hall), Greene, 485.
 zenkeri (Billings), Greene, 483.
 Helix (Epiphyragmophora) sp. indet., Arnold, 38.
 Helodermoides tuberculatus n. gen. and sp., Douglass, 317.
 Helodus incisus n. sp., Eastman, 337.
 rugosus Newberry and Worthen, Eastman, 337.
 Hemitapes Römer, Dall, 261.
 Heptodon?, Douglass, 317.
 Here Gabb, Dall, 261.
 Hesperhys n. gen., Douglass, 317.
 vagrans n. sp., Douglass, 317.
 Hesperornis gracilis, Lucas, 814.
 regalis, Lucas, 814, 815.
 Heteroceras elongatum n. sp., Whiteaves, 1308.
 hornbyense Whiteaves, Whiteaves, 1308.

Paleontology—Continued.

Genera and species described—Continued.

- Heteroclidus n. subg., Dall, Dall, 261.
 Heterotrypa parvulipora Ulrich and Bassler, Hayes and Ulrich, 533.
 Hindia fibrosa (Roemer), Weller, 1291.
 nodulosa Whiteaves, 1308.
 parva Ulrich, Weller, 1291.
 Hinnites Defrance, Arnold, 38.
 Hipparionyx proximus (Van.), Weller, 1291.
 Hipponyx De France, Arnold, 38.
 antiquatus Linnaeus, Arnold, 38.
 cranioides Carpenter, Arnold, 38.
 tumens Carpenter, Arnold, 38.
 Holasaphus, Matthew, 858.
 centropyge, Matthew, 858.
 Holocystis papulosus? M. & G., Rowley, 485.
 Holopea antiqua (Van.), Weller, 1291.
 parvula Ulrich, Weller, 1291.
 ? raymondia n. sp., Cleland, 208.
 supraplana U. & S.?, Weller, 1291.
 symmetrica Hall, Weller, 1291.
 ? voluta n. sp., Cleland, 208.
 Homacanthus Agassiz, Eastman, 337.
 acinaciformis n. sp., Eastman, 337.
 delicatulus n. sp., Eastman, 337.
 Homalomonotus vanuxemi Hall, Weller, 1291.
 Homomya austinisensis n. sp., Shattuck, 1098.
 vulgaris n. sp., Shattuck, 1098.
 Homotrypa Ulrich, Bassler, 60.
 austini n. sp., Bassler, 50.
 bassleri Nickles, Bassler, 60.
 cincinnatiensis n. sp., Bassler, 60.
 communis n. sp., Bassler, 60.
 curvata Ulrich, Bassler, 60.
 curvata var. praecepta n. var., Bassler, 60.
 cylindrica n. sp., Bassler, 60.
 dawsoni (Nicholson), Bassler, 60.
 dumosa n. sp., Bassler, 60.
 flabellaris Ulrich, Bassler, 60.
 flabellaris var. spinifera n. var., Bassler, 60.
 frondosa n. sp., Bassler, 60.
 gelasinosa Ulrich, Bassler, 60.
 grandis n. sp., Bassler, 60.
 libana n. sp., Bassler, 60.
 nicklesi n. sp., Bassler, 60.
 nodulosa n. sp., Bassler, 60.
 nitida n. sp., Bassler, 60.
 obliqua Ulrich, Bassler, 60.
 pulchra n. sp., Bassler, 60.
 ramulosa n. sp., Bassler, 60.
 richmondensis n. sp., Bassler, 60.
 splendens n. sp., Bassler, 60.
 wortheni (James), Bassler, 60.
 wortheni var. intercellata n. var., Bassler, 60.
 wortheni var. prominens n. var., Bassler, 60.
 Homotrypella nodosa Ulrich and Bassler, Hayes and Ulrich, 533.
 Honecoya n. gen., Clarke, 200.
 desmata n. sp., Clarke, 200.
 erinacea n. sp., Clarke, 200.
 major n. sp., Clarke, 200.
 simplex n. sp., Clarke, 200.
 styliophila n. sp., Clarke, 200.
 Hoploparia bennettii Woodward, Whiteaves, 1308.

Paleontology—Continued.

Genera and species described—Continued.

- Hoploparia *grœnlandica* n. sp., Ravn, 996.
 Hormotoma *salteri* Ulrich, Weller, 1291.
 whiteavesi n. sp., Clarke and Ruedemann, 204.
 Hughmilleria n. gen., Sarle, 1070.
 socialis n. sp., Sarle, 1070.
 socialis var. *robusta* n. var., Sarle, 1070.
 Hustedia *mormoni* (Marcon), Beede, 64.
 mormoni Marcon, Girty, 455.
 Hyænognathus? (Porthocyon n. gen.?) *dubius* n. sp., Merriam, 883.
 pachyodon n. gen. and n. sp., Merriam, 883.
 Hyalostelia sp., Girty, 455.
 Hyattella? *lamellosa* n. sp., Weller, 1291.
 Hydreionocrinus *depressus* (Troost), Grabau, 464.
 kansasensis Weller, Beede, 64.
 subsinnuatus Miller and Gurley, Beede, 64.
 Hyolithes *centennialis* Barrett, Weller, 1291.
 neapolis Clarke, Clarke, 200.
 cf. *tenuistriatus* Linns., Matthew, 858.
 Hyphantosoma Dall, Dall, 261.
 Hyrachys, Douglass, 317.
 ? *priscus* n. sp., Douglass, 317.
 Hyracodon sp., Matthew, 863.
 Hysteroconcha Fischer, Dall, 261.
 Hystriosphingia? sp., Girty, 455.
 Icanotia Stoliczka, Dall, 261.
 Ichthyocrinus *magnaradialis* n. sp., Weller, 1291.
 Ichthyodectes Cope, Loomis, 808.
 Ichthyodectes Cope, Stewart, 1186.
 acanthicus Cope?, Stewart, 1186.
 anaides Cope, Hay, 517.
 anaides Cope, Loomis, 808.
 anaides Cope, Stewart, 1186.
 ercentus Hay, Stewart, 1186.
 ctenodon Cope, Loomis, 808.
 ctenodon Cope, Stewart, 1186.
 hamatus Cope, Loomis, 808.
 hamatus Cope, Stewart, 1186.
 multidentatus Cope, Hay, 517.
 multidentatus Cope, Loomis, 808.
 occidentalis Leidy, Loomis, 808.
 Ichthyosaurus, Merriam, 882, 885.
 Ictops *acutidens* Douglas, Matthew, 863.
 thomsoni n. sp., Matthew, 863.
 Illæurus *columbiana* n. sp., Weller, 1291.
 Indiana, Matthew, 858.
 hippa, Matthew, 858.
 ovalis, Matthew, 858.
 ovalis mut. *prima*, Matthew, 858.
 Inoceramus *balchii* M. and H., Johnson, 647.
 crispus var. *barabini* Morton, Johnson, 647.
 digitatus (Sowerby) Schmidt, Whiteaves, 1308.
 dimidius White, Johnson, 647.
 fragilis H. and M., Johnson, 647.
 irregularis n. sp., Johnson, 647.
 labiatus Schlotheim, Johnson, 647.
 simpsoni Meek, Johnson, 647.
 vanuxemi M. and H., Johnson, 647.
 n. sp.?, Johnson, 647.
 sp., Shattuck, 1098.

Paleontology—Continued.

Genera and species described—Continued.

- Iphidea *pannula* White sp., Matthew, 857.
 Isapis H. & A. Adams, Arnold, 38.
 Ischnochiton Gray, Arnold, 38.
 regularis Carpenter, Arnold, 38.
 Ischyromys *veterior* n. sp., Matthew, 863.
 Isocardia *medialis* (Conrad), Shattuck, 1098.
 Isochilina *gregaria* Whitfield, var. (?), Jones, 655.
 gregaria (Whitfield), var. *ulrichiana*, nov., Jones, 655.
 sp.?, Jones, 655.
 Isodomo (Deshayes) Cossmann, Dall, 261.
 Isotelus *canalis* Whitf., Weller, 1291.
 florenciavillensis n. n. (Isotelus) *suse* Clarke, not Whitfield, Calvin, 158.
 gigas De Kay, Weller, 1291.
 suse Whitfield, Calvin, 158.
 Isurus *mantelli* (Geinitz), Williston, 1330.
 Ivara D. & B. (MSS.), Arnold, 38.
 Ixartia Leach, Dall, 261.
 Jackelocystis n. gen., Schuchert, 1091.
 hartleyi n. sp., Schuchert, 1091.
 Jagonia Récluz, Dall, 261.
 Janassa *maxima* n. sp., Eastman, 337.
 ungula n. sp., Eastman, 337.
 Kadaliosaurus Credner, Osborn, 948.
 Katelsia (Römer) Tryon, Dall, 261.
 Kellia Turton, Arnold, 38.
 laperousii Deshayes, Arnold, 38.
 suborbicularis Montagu, Arnold, 38.
 Kennerleyia Cpr. (em.), Dall, 261.
 Kennerlia Carpenter, Arnold, 38.
 Kingena *occidentalis* n. sp., Whiteaves, 1308.
 Kionoceras *darwini* Billings (sp.), Clarke and Ruedemann, 204.
 medullare Hall (sp.), Clarke and Ruedemann, 204.
 Kirkbya sp., Girty, 455.
 Kochia Frech, Clarke, 200.
 ungula n. sp., Clarke, 200.
 Labiosa (Schmidt) Möller, Arnold, 38.
 (Raeta) *undulata* Gould, Arnold, 38.
 Laeuna Turton, Arnold, 38.
 compacta Carpenter, Arnold, 38.
 correcta Carpenter, Arnold, 38.
 solidula (Lovén) Carpenter, Arnold, 38.
 Læviocardium Swainson, Arnold, 38.
 Lamellaria Montagn, Arnold, 38.
 stearnsii Dall, Arnold, 38.
 Lamelliconcha Dall, Dall, 261.
 Lamna *appendiculata* Agassiz, Whiteaves, 1308.
 appendiculata (Römer), Williston, 1330.
 macrorhiza Cope, Williston, 1330.
 mudgei Cope, Williston, 1330.
 quincquelateralis Cragin, Williston, 1330.
 sulcata (Geinitz), Williston, 1330.
 sp., Williston, 1330.
 (Odontaspis?) sp., Williston, 1330.
 Lancea Pease, Arnold, 38.
 Laqueus Dall, Arnold, 38.
 jeffreysi Dall, Arnold, 38.
 Lasiograptus *mucronatus* (Hall), Weller, 1291.
 fischeri Heer, Penhallow, 967.
 Laternula Bolton, Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Latirus elaboratus* n. sp., Aldrich, 16.
Laurophyllum angustifolium Newb., Berry, 76.
Laurus hollae Heer, Berry, 76.
 hollickii n. sp., Berry, 76.
 plutonia Heer, Berry, 76.
 proteafolia Lesq., Berry, 76.
Lazaria Conrad, Arnold, 38.
 subquadrata Carpenter, Arnold, 38.
Leda Schumacher, Arnold, 38.
 fossa Baird, Arnold, 38.
 hamata Carpenter, Arnold, 38.
 minuta Fabr. var. *præcursor* n. var., Arnold, 38.
 rostellata Conrad, mut. *pygmaea* nov., Loomis, 809.
 taphria Dall, Arnold, 38.
Leioclema? sp., Girty, 455.
Leiomya A. Adams, Dall, 261.
Leperditella ornata n. sp., Weller, 1291.
Leperditia alta (Con.), Weller, 1291.
 altoides n. sp., Weller, 1291.
 balthica Hisinger var. *guelphica* Jones, Clarke and Ruedemann, 204.
 elongata n. sp., Weller, 1291.
 fabulites (Con.), Weller, 1291.
 gigantea n. sp., Weller, 1291.
 ? *rugosa*, Matthew, 858.
 sp., Girty, 455.
Lepidocardia Dall, Dall, 261.
Lepidostrobus, Smith, 1125.
Leptena rhomboidalis Wilck., Weller, 1291.
 rhomboidalis (Wilck.) var. *ventricosa* (Hall), Weller, 1291.
Leptaxinus Verrill and Bush, Dall, 261.
Leptesthes Meek, Dall, 261.
Leptichthys Stewart, 1186.
 agilis n. sp., Stewart, 1186.
Leptobolus Hall, Matthew, 858.
 atavus, Matthew, 858.
 atavus mut. *insulæ* n. mut., Matthew, 858.
 atavus mut. *tritavus* n. mut., Matthew, 858.
 collicia, Matthew, 858.
 collicia var. *collis* n. var., Matthew, 858.
 flumenis n. sp., Matthew, 858.
 gemmulus, Matthew, 858.
 cf. *grandis*, Matthew, 857.
 cf. *linguloides*, Matthew, 858.
 torrentis n. sp., Matthew, 858.
Leptocheirus n. gen., Merriam, 882.
 zitteli n. sp., Merriam, 882.
Leptocodon rectus Williston, Stewart, 1186.
Leptodomus interplicatus n. sp., Clarke, 200.
 multiplex n. sp., Clarke, 200.
Leptomeryx? *esulatus* Cope, Matthew, 863.
 mammifer Cope, Matthew, 863.
 transmontanus n. sp., Douglass, 317.
Leptopora winchelli White, Girty, 455.
Leptophyllia sp. (no. 1), Vaughan, 1244.
 sp. (no. 2), Vaughan, 1244.
Leptosomus Marek, Hay, 517.
 lineatus (Cope), Hay, 517.
 nasutulus (Cope), Hay, 517.
 percrassus (Cope), Hay, 517.

Paleontology—Continued.

Genera and species described—Continued.

- Leptostyrax bicuspidatus* Williston, Williston, 1330.
Leptothyra Carpenter, Arnold, 38.
 bacula Carpenter, Arnold, 38.
 carpenteri Pilsbry, Arnold, 38.
 paucicostata Dall, Arnold, 38.
Leptotrachylus longipinnis Cope, Hay, 517.
Leptotragulus profectus n. sp., Matthew, 863.
Lichas pustulosus Hall, Weller, 1291.
Lichenalia torta Hall, Weller, 1291.
Lima (Bruguière) Cuvier, Arnold, 38.
 (Mantellum) *dehiscens* Conrad, Arnold, 38.
 retifera Shumard, Beede, 64.
 shumardi n. sp., Shattuck, 1098.
 suciensis n. sp., Whiteaves, 1308.
 wacoensis Römer, Shattuck, 1098.
 sp., Shattuck, 1098.
 sp. ind., Whiteaves, 1308.
Limnencetes sp., Matthew, 863.
Limopteria alata (Beede), Beede, 64.
 gibbosa (Meek and Worthen), Beede, 64.
 longispina (Cox), Beede, 64.
 marian (White), Beede, 64.
 subalata (Beede and Rogers), Beede, 64.
Lingula carbonaria Shumard, Girty, 455.
 ? *ovata* n. sp., Cleland, 208.
 mytiloides Sowerby, Beede, 64.
 philomela Bill.?, Weller, 1291.
 riciniformis Hall, Weller, 1291.
 tighti Herriek, Girty, 455.
Lingulasma galenensis W. & S., Weller, 1291.
Lingulella concinna, Matthew, 858.
 cf. *davisii* McCoy, Matthew, 858.
 levis var. *grandis* n. var., Matthew, 858.
 lævis var. *lens*, Matthew, 858.
 longovalis n. sp., Matthew, 858.
 cf. *longovalis*, Matthew, 858.
 macconnelli Walcott, Matthew, 857.
 radula var. *aspera* n. var., Matthew, 858.
 roberti n. sp., Matthew, 858.
 selwyni, Matthew, 858.
 stoneana Whitf., Weller, 1291.
 tumida, Matthew, 858.
Lingulepis Hall, Matthew, 858.
 gregwa, Matthew, 858.
 gregwa var. *robusta* n. var., Matthew, 858.
 longinervis n. sp., Matthew, 858.
 pumila n. sp., Matthew, 858.
 rotunda n. sp., Matthew, 858.
 starri var., Matthew, 858.
 starri mut. *exigua* n. mut., Matthew, 858.
Lingulops norwoodi (James), Hayes and Ulrich, 533.
Linnarssoniacf. belti Davidson?, Matthew, 858.
Linuparus canadensis Whiteaves, Whiteaves, 1308.
 vancouverensis Whiteaves, Whiteaves, 1308.
Lioconcha Murch, Dall, 261.
Liocyra Dall, Dall, 261.
Liospira micula (Hall), Weller, 1291.
 strigata n. sp., Collie, 228.
 sp. undet., Weller, 1291.
Lirodiscus Conrad, Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Lirodiscus protractus* O. Meyer, Dall, 261.
wailesii n. sp., Dall, 261.
Lirophora Conrad, Dall, 261.
Lithodomus nitidus n. sp., Whiteaves, 1308.
Lithophaga Bolten, Arnold, 38.
plumula Hanley, Arnold, 38.
Littorina Ferussac, Arnold, 38.
planaxis (Nuttall) Philippi, Arnold, 38.
scutulata Gould, Arnold, 38.
Lonsdaleia (or *Lithostrotion*) *canadense* (Castelnau), Hayes and Ulrich, 533.
Lophophyllum profundum (Milne-Edwards and Haime), Beede, 64.
profundum Milne-Edwards and Haime, Girty, 455.
vesti (Beede), Beede, 64.
Lophospira bispiralis Hall (sp.), Clarke and Ruedemann, 204.
medialis U. & S., Weller, 1291.
oweni U. & S., Weller, 1291.
Loripes Cuvier, Dall, 261.
Loxonema attenuata Hall, Weller, 1291.
danai n. sp., Clarke, 200.
delphicola Hall, mut. *moloch* Clarke, Loomis, 809.
jerseyensis n. sp., Weller, 1291.
multiplicatum n. sp., Clarke, 200.
noe Clarke, Clarke, 200.
parvum Cox?, Girty, 455.
? peoriense Worthen, Girty, 455.
plicatum Whitfield, Girty, 455.
? sp., Girty, 455.
sp. undet., Weller, 1291.
Loxopteria Frech, Clarke, 200.
(Sluzka) corrugata n. sp., Clarke, 200.
dispar, Sandberger, Clarke, 200.
(Sluzka) intumescens n. sp., Clarke, 200.
lavis Frech, Clarke, 200.
vasta n. sp., Clarke, 200.
Loxoptychodon Sandberger, Dall, 261.
Lucapina Gray, Arnold, 38.
crenulata Sowerby, Arnold, 38.
Lucina Brugière, Arnold, 38.
(Brugière) Lamarek, Dall, 261.
acutilineata Conrad, Arnold, 38.
californica Conrad, Arnold, 38.
chrysostoma (Meuschen) Philippi, Dall, 261.
corpulenta n. sp., Dall, 261.
janus n. sp., Dall, 261.
nuttalli Conrad, Arnold, 38.
santarosana n. sp., Dall, 261.
scopularis n. sp., Casey, 178.
subvexa Conrad, Dall, 261.
tenuisculpta Carpenter, Arnold, 38.
vicksburgensis n. sp., Casey, 178.
sp. indet., Dall, 261.
Lucinella Monterosato, Dall, 261.
Luciniscia Dall, Dall, 261.
Lucinoma Dall, Dall, 261.
Ludovicica Cossmann, Dall, 261.
Lunatia Gray, Arnold, 38.
Lunulicardium Münster, Clarke, 200.
(Prochasma) absegmen n. sp., Clarke, 200.
(Pinnopsis) accola n. sp., Clarke, 200.

Paleontology—Continued.

Genera and species described—Continued.

- Lunulicardium* (Pinnopsis) *acutirostrum* Hall, Clarke, 200.
beushauseni n. sp., Clarke, 200.
(Prochasma) bickense Holzapfel, Clarke, 200.
elymenia, Clarke, 198.
(Chaenocardiola) elymenia n. sp., Clarke, 200.
enerinitum n. sp., Clarke, 200.
(Prochasma) enode n. sp., Clarke, 200.
(Chaenocardiola) erienne n. sp., Clarke, 200.
finitimum n. sp., Clarke, 200.
(Chaenocardiola) furcatum n. sp., Clarke, 200.
hemicardioides, Clarke, 198.
(Chaenocardiola) hemicardioides n. sp., Clarke, 200.
(Pinnopsis) libum n. sp., Clarke, 200.
mülleri, Clarke, 198.
(Pinnopsis) ornatum Hall, Clarke, 200.
(Prochasma) parunculus n. sp., Clarke, 200.
pilosum n. sp., Clarke, 200.
sodale n. sp., Clarke, 200.
suppar n. sp., Clarke, 200.
? (Opisthocaelus?) transversale n. sp., Clarke, 200.
velatum n. sp., Clarke, 200.
(Pinnopsis) wiscoyense n. sp., Clarke, 200.
n. sp., Clarke, 200.
n. sp.?, Clarke, 200.
Luzonia Dall and Smith, Dall, 261.
Lyonsia Turton, Arnold, 38.
Lyonsia Turton, Dall, 261.
section Allogramma Dall, Dall, 261.
section Philippina Dall, Dall, 261.
acuta n. sp., Dall, 261.
californica Conrad, Arnold, 38.
Lyria nestor n. sub-sp., Casey, 178.
Lysis sciensis Whiteaves, Whiteaves, 1308.
Macoma Leach, Arnold, 38.
calcareia Gmelin, Arnold, 38.
indentata Carpenter, Arnold, 38.
inquinata Deshayes, Arnold, 38.
nasuta Conrad, Arnold, 38.
nasuta Conrad var. *kelseyi* Dall, Arnold, 38.
secta Conrad, Arnold, 38.
yoldiformis Carpenter, Arnold, 38.
Maeridiscus Dall, Dall, 261.
Macrocallista Meek, Dall, 261.
section Chionella Cossmann, Dall, 261.
section Macrocallista s. s., Dall, 261.
acuminata n. sp., Dall, 261.
albaria Say, Dall, 261.
(Chionella) maculata Linné, Dall, 261.
(Chionella) marylandica Conrad, Dall, 261.
nimbosa Solander, Dall, 261.
pittsburgensis Dall, Dall, 261.
reposta Conrad, Dall, 261.
Macrocephalites ishmæ Keyserling sp., Madsen, 836.
sp. cf. macrocephalus Schlotheim sp., Madsen, 836.
pompeckji n. sp., Madsen, 836.

Paleontology—Continued.

Genera and species described—Continued.

- Macrochilina hamiltoniae* Hall, mut. *pygmæa* Clarke, Loomis, 809.
hebe Hall, mut. *pygmæa* nov., Loomis, 809.
onondagaensis Clarke, Wilson, 1335.
pygmæa n. sp., Clarke, 200.
seneca n. sp., Clarke, 200.
 sp. indet., Clarke and Ruedemann, 204.
Macrodon obsoletus Meek, Beede, 64.
sangamonensis Worthen?, Beede, 64.
Macron H. and A. Adams, Arnold, 38.
kellettii A. Adams, Arnold, 38.
lividus A. Adams, Arnold, 38.
Mactra Linné, Arnold, 38.
californica Conrad, Arnold, 38.
(Spisula) catilliformis Conrad, Arnold, 38.
exoleta Gray, Arnold, 38.
(Spisula) falcata Gould, Arnold, 38.
hemphilli Dall, Arnold, 38.
Magnolia obtusata Heer, Berry, 76.
paleopetala n. sp., Hollick, 592.
tenuifolia Lesq., Berry, 76.
woodbridgensis Hollick, Berry, 76.
Mariopteris cordato-ovato obtusiloba n. var., White, 1296.
Majanthemophyllum grandifolium n. sp., Penhallow, 967.
Mangilia Risso, s. s., Arnold, 38.
Mangilia (Leach) Risso, Arnold, 38.
angulata Carpenter, Arnold, 38.
(Cythara) branneri n. sp., Arnold, 38.
(Clathurella) conradiana Gabb, Arnold, 38.
hooveri n. sp., Arnold, 38.
interfossa var. *pedroana* n. var., Arnold, 38.
interlirata Stearns, Arnold, 38.
oldroydi n. sp., Arnold, 38.
painei n. sp., Arnold, 38.
sculpturata Dall, Arnold, 38.
striosa C. B. Adams, Arnold, 38.
(Taranis) strongi n. sp., Arnold, 38.
Mantelliceras n. gen., Hyatt, 625.
Mantellum Adams, Arnold, 38.
Marcia H. and A. Adams, Dall, 261.
 section *Hemitapes* Römer, Dall, 261.
 section *Mercimonia* Dall, 261.
 section *Samarangia* Dall, 261.
 section *Textivenus* Cossmann, Dall, 261.
 section *Venerella* Cossmann, Dall, 261.
Margarita Leach, Arnold, 38.
optabilis Carpenter, var. *knechti* n. var., Arnold, 38.
optabilis Carpenter var. *nodosa* n. var., Arnold, 38.
parcipieta Carpenter, var. *pedroana* n. var., Arnold, 38.
pupilla Gould, Arnold, 38.
Margaritaria abrupta Conrad, Dall, 261.
Marginella Lamarek, Arnold, 38.
jewettii Carpenter, Arnold, 38.
(Volvarina) varia Sowerby, Arnold, 38.
Marginifera haydenensis n. sp., Girty, 455.
ingrata n. sp., Girty, 455.
lasallensis Worthen?, Girty, 455.

Paleontology—Continued.

Genera and species described—Continued.

- Marginifera muricata* Norwood and Pratten, Girty, 455.
wabashensis Norwood and Pratten var., Girty, 455.
Martesia? *parvula* n. sp., Whiteaves, 1308.
Mastodon, Douglass, 317.
Matheria brevis n. sp., Whiteaves, 1304.
Medlicottia, Waagen, Smith, 1137.
copei White, Smith, 1137.
Meekella striaticostata Cox, Girty, 455.
striatocostata (Cox), Beede, 64.
Meckopora Ulrich, Condra, 238.
prosseri Ulrich, Condra, 238.
Megablattina n. gen., Sellards, 1095.
beecheri n. sp., Sellards, 1095.
Megalneusaurus Knight, Williston, 1325.
Megambonia aviculoidea Hall, Weller, 1291.
bellistriata Hall, Weller, 1291.
parva n. sp., Weller, 1291.
 ? sp. undet., Weller, 1291.
Megapezia n. gen., Matthew, 859.
pincoi, Matthew, 859.
Megistoerinus corniger, Rowley, 483.
expansus M. & G., Rowley, 485.
expansus var. *magniventrus* n. var., Rowley, 480.
expansus var. *magniventrus?*, Rowley, 483.
hemisphericus? M. & G., Rowley, 483.
oppelti n. sp., Rowley, 482.
rugosus L. & C., Rowley, 482.
rugosus var. *spinuliferus* n. var., Rowley, 480.
Melampus Montfort, Arnold, 38.
olivaceus Carpenter, Arnold, 38.
Melocrinus clarkei (Hall) Williams, Clarke, 200.
Menophyllum ulrichanum n. sp., Girty, 455.
Mercimonia Dall, Dall, 261.
Meretrix Lamarek, Dall, 261.
arata Gabb, Whiteaves, 1308.
Meristella laevis (Van.), Weller, 1291.
princeps Hall, Weller, 1291.
lata (Hall), Weller, 1291.
Merychys smithi n. sp., Douglass, 317.
Merycodus?, Douglass, 317.
 ? *neatus?* Leidy, Douglass, 317.
Mesoblastus Etheridge fil. and Carpenter, Hambach, 498.
Mesocyon? *drummondanus* n. sp., Douglass, 317.
Mesodon abrasus Cragin, Williston, 1330.
Mesohippus latidens n. sp., Douglass, 317.
westoni Cope, Matthew, 863.
Mesostoma? *intermedium* n. sp., Whiteaves, 1308.
 ? *newcombii* n. sp., Whiteaves, 1308.
suciense n. sp., Whiteaves, 1308.
Metablastus bipyramidalis Hall, Rowley, 485.
nifidulus M. & G., Rowley, 481.
Metacheiromys marshi n. gen. and sp., Wortman, 1355.
Metamynodon?, Douglass, 317.
Metaplasia plicata n. sp., Weller, 1291.
pyxidata (Hall), Weller, 1291.
Metasigaloceras n. gen., Hyatt, 625.

Paleontology—Continued.*Genera and species described—Continued.*

- Metatissotia n. gen., Hyatt, 625.
 Metengonoceras n. gen., Hyatt, 625.
 acutum n. sp., Hyatt, 625.
 ambiguum n. sp., Hyatt, 625.
 dumbli (Cragin), Hyatt, 625.
 inscriptum n. sp., Hyatt, 625.
 inscriptum var.?, Hyatt, 625.
 Metis H. and A. Adams, Arnold, 38.
 alta Conrad, Arnold, 38.
 Metoicoceras n. gen., Hyatt, 625.
 acceleratum n. sp., Hyatt, 625.
 gibbosum n. sp., Hyatt, 625.
 swallovi (Shumard), Hyatt, 625.
 whitei n. sp., Hyatt, 625.
 Moptoma amii n. sp., Matthew, 857.
 Metula fastidiosa n. sp., Casey, 178.
 fragilis n. sp., Casey, 178.
 Meyeria? harveyi Woodward, Whiteaves, 1308.
 Michelinia eugeneae White, Beede, 64.
 wardi n. sp., Greene, 482.
 Microdiscus? sp. undet., Weller, 1291.
 Microdrillia n. gen., Casey, 178.
 aldrichiella n. sp., Casey, 178.
 biplicatula n. sp., Casey, 178.
 [Pleurotoma] eosmanni Meyer, Casey, 178.
 elongatula n. sp., Casey, 178.
 [Glyphostoma] harrisi Ald., Casey, 178.
 [Pleurotoma] infans Meyer, Casey, 178.
 [Pleurotoma] lerchi Vgn, Casey, 178.
 minutissima n. sp., Casey, 178.
 robustula n. sp., Casey, 178.
 rostratula n. sp., Casey, 178.
 solidula n. sp., Casey, 178.
 vicksburgella n. sp., Casey, 178.
 Micromeris Conrad, Dall, 261.
 Micropternodus borealis n. gen. and sp., Matthew, 863.
 Microstagon Cossmann, Dall, 261.
 Microsypops Leidy, Wortman, 1355.
 annectens Marsh, Wortman, 1355.
 elegans Marsh, Wortman, 1355.
 gracilis Leidy, Wortman, 1355.
 schlosseri n. sp., Wortman, 1355.
 Milleroceras parrishi Miller and Gurley, Smith, 1137.
 Milneria Dall, Dall, 261.
 Miltha H. and A. Adams, Dall, 261.
 Miodontiscus Dall, Dall, 261.
 Miodontopsis Dall, Dall, 261.
 Mitra Lamarek, Arnold, 38.
 maura Swainson, Arnold, 38.
 Mitromorpha A. Adams, Arnold, 38.
 filosa Carpenter, Arnold, 38.
 intermedia n. sp., Arnold, 38.
 Mixodectes Cope, Wortman, 1355.
 Mixosaurus, Merriam, 882.
 Modiella sp.?, Clarke, 200.
 Modiola cfr. simplex J. Sowerby, Ravn, 996.
 siskiyouensis Gabb, Whiteaves, 1308.
 subelliptica Meek, Beede, 64.
 ? subelliptica Meek, Girty, 455.
 (Brachydontes) sp. ind., Whiteaves, 1308.
 ? sp., Shattuck, 1098.

Paleontology—Continued.*Genera and species described—Continued.*

- Modiolopsis depressa n. sp., Weller, 1291.
 faba (Con.), Weller, 1291.
 jerseyensis n. sp., Weller, 1291.
 ? cf. solvensis Hicks, Matthew, 858.
 Modiolus Lamarek, Arnold, 38.
 fornicatus Carpenter, Arnold, 38.
 rectus Conrad, Arnold, 38.
 Mœrella Fiseher, Arnold, 38.
 Monia Gray, Arnold, 38.
 Monilipora prosseri Beede, Girty, 455.
 Monobolina refulgens, Matthew, 858.
 Monoceros Lamarek, Arnold, 38.
 engonatum Conrad, Arnold, 38.
 lapilloides Conrad, Arnold, 38.
 Monocladodus Clappole, Clappole, 206.
 clarki Clappole, Clappole, 206.
 pinnatus Clappole, Clappole, 206.
 Monomorella noveboracum n. sp., Clarke and Ruedemann, 204.
 Monopteria alata Beede, Girty, 455.
 longispina Cox, Girty, 455.
 polita White, Girty, 455.
 Monotrypa corrugata n. sp., Weller, 1291.
 globosa n. sp., Weller, 1291.
 sphaerica (Hall), Weller, 1291.
 Monotrypella quadrata (Rominger), Hayes and Ulrich, 533.
 Monticulipora molesta Nicholson, Hayes and Ulrich, 533.
 Mopalia Gray, Arnold, 38.
 ciliata Sowerby, Arnold, 38.
 Morieonia cyclotoxon Deb. & Ett., Berry, 76.
 Muensteroceras Hyatt, Smith, 1137.
 ? holmesi Swallow, Smith, 1137.
 ? indianense Miller, Smith, 1137.
 ? morganense Swallow, Smith, 1137.
 osagense Swallow, Smith, 1137.
 oweni Hall, Smith, 1137.
 parallelum Hall, Smith, 1137.
 Murex Linné, Arnold, 38.
 (Pteronotus) festivus Hinds, Arnold, 38.
 (Pterorhytis) foliatus Martyn, Arnold, 38.
 (Chicoreus) lecanus Dall, Arnold, 38.
 (Pterorhytis) monoceros Sowerby, Arnold, 38.
 (Pterorhytis) nuttalli Conrad, Arnold, 38.
 (Chicoreus?) trialatus Sowerby, Arnold, 38.
 Mustela? minor n. sp., Douglass, 317.
 Museulium Link, Dall, 261.
 Myalina ampla Meek and Hayden, Beede, 64.
 arkansasana Weller?, Girty, 455.
 congeneris Walcott, Beede, 64.
 cuneiformis Gurley, Girty, 455.
 ? exasperata Beede, Beede, 64.
 kansasensis Shumard, Beede, 64.
 keokuk Worthen, Girty, 455.
 perattenuata Meek and Hayden, Beede, 64.
 perattenuata Meek and Hayden?, Girty, 455.
 perniformis Cox?, Girty, 455.
 subquadrata Shumard, Beede, 64.
 subquadrata Shumard?, Girty, 455.

Paleontology—Continued.

Genera and species described—Continued.

- Myalina swallovi* McChesney, Beede, 64.
wyomingensis Lea, Girty, 455.
Mylacris (*Dipeltis*) *diplodiscus*, Sellards, 1095.
Mylagaulodon angulatus n. gen. and sp., Sinclair, 1116.
Mylagaulus Cope, Douglass, 317.
Mylagaulus paniensis? Matthew, Douglass, 317.
?pristinus n. sp., Douglass, 317.
proximus n. sp., Douglass, 317.
 sp., Douglass, 317.
Myoeoneha grønlandica n. sp., Madsen, 836.
Myonera Dall and Smith, Dall, 261.
Myriapodites sp., Matthew, 861.
Myriæa heerii n. sp., Berry, 75.
Myrsine crassa Lesq., Berry, 76.
Myrsus H. and A. Adams, Dall, 261.
Myrtæa Turton, Dall, 261.
 section *Eulopia* Dall, Dall, 261.
 section *Myrtæa* s. s., Dall, 261.
 section *Myrtæopsis* Saeco, Dall, 261.
 (*Eulopia*) *fureata* n. sp., Dall, 261.
limoniana n. sp., Dall, 261.
 (*Eulopia*) *vermiculata* n. sp., Dall, 261.
Myrtæopsis Saeco, Dall, 261.
Mysia Leach, Dall, 261.
Mytilarea aeutirostrum Hall, Clarke and Ruedemann, 204.
eduliformis n. sp., Clarke and Ruedemann, 204.
obliqua n. sp., Weller, 1291.
Mytilimeria Conrad, Arnold, 38.
nuttalli Conrad, Arnold, 38.
Mytilus (Linné) Bolten, Arnold, 38.
affinis J. Sowerby, Ravn, 996.
edulis Linné, Arnold, 38.
pauperculus Gabb, Whiteaves, 1308.
Nassa Lamarek, Arnold, 38.
californiana Conrad, Arnold, 38.
cerriensis n. sp., Arnold, 38.
fossata Gould, Arnold, 38.
inseulpta Carpenter, Arnold, 38.
mendica Gould, Arnold, 38.
mendica Gould, var. *cooperi* Forbes, Arnold, 38.
perpinguis Hinds, Arnold, 38.
tegula Reeve, Arnold, 38.
versicolor C. B. Adams, var. *hooveri* n. var., Arnold, 38.
Natica (Adanson) Scopoli, Arnold, 38.
 (*Cryptonatica*) *clausa* Broderip and Sowerby, Arnold, 38.
Naticopsis altonensis McChesney, Girty, 455.
monilifera White, Girty, 455.
Nautilus hilli n. sp., Shattuck, 1098.
texanus Shumard, Shattuck, 1098.
Neræa Gray, Arnold, 38.
pectinata Carpenter, Arnold, 38.
Nelumbo primæva n. sp., Berry, 76.
Neocardia Sowerby, Dall, 261.
Neocrassina Fischer, Dall, 261.
Neohipparion whitneyi n. gen. and sp., Gidley, 438.
Nerinea dispar? Gabb, var., Whiteaves, 1308.

Paleontology—Continued.

Genera and species described—Continued.

- Neuropteris carceraria* n. sp., White, 1296.
bastata n. sp., White, 1296.
lindahli n. sp., White, 1296.
Neverita Kisso, Arnold, 38.
Nicklesia n. gen., Hyatt, 625.
Nilsonia polymorpha eretacea (Sch.), Penhallow, 967.
Nodipeeten Dall, Arnold, 38.
Nomismoceras Hyatt, Smith, 1137.
?monroense Worthen, Smith, 1137.
Norrisia Bayle, Arnold, 38.
norrisii Sowerby, Arnold, 38.
Nucleocrinus greenei M. & G., Rowley, 481.
verneuili Troost, Rowley, 481.
Nucleospira concinna Hall, mut. *pygmæa* nov., Loomis, 809.
ventricosa Hall, Weller, 1291.
Nucula Lamarek, Arnold, 38.
beyrichi Geinitz, Beede, 64.
 (*Aeila*) *castrensis* Hinds, Arnold, 38.
corbuliformis Hall, mut. *pygmæa* nov., Loomis, 809.
hornbyensis Whiteaves, Whiteaves, 1308.
lirata Conrad, mut. *pygmæa* nov., Loomis, 809.
pulchella Beede and Rogers, Beede, 64.
richardsoni Whiteaves, Whiteaves, 1308.
similis J. Sowerby, Ravn, 996.
 (*Nucula*) *suprastriata* Carpenter, Arnold, 38.
 (*Aeila*) *truncata* Gabb, Whiteaves, 1308.
varicosa Hall, mut. *pygmæa* nov., Loomis, 809.
ventricosa Hall, Beede, 64.
?sp. undet., Weller, 1291.
Nuculana bellistriata (Stevens), Beede, 64.
bellistriata attenuata Meek, Beede, 64.
Nueulites oblongatus Conrad, mut. *pygmæus* nov., Loomis, 809.
triqueter Conrad, mut. *pygmæus* nov., Loomis, 809.
Nuttallia Dall, Arnold, 38.
Nyetopora billingsi Nieh., Weller, 1291.
Nyetosaurus Marsh, Williston, 1326.
gracilis Marsh, Williston, 1326.
Obolus Eichwald, Matthew, 858.
æquiputeis, Matthew, 854.
æquiputeis n. sp., Matthew, 858.
bretonensis, Matthew, 854.
disens, Matthew, 854.
discus n. sp., Matthew, 858.
ella Hall and W., Matthew, 857.
ella, Matthew, 854.
lens, Matthew, 854.
lens n. sp., Matthew, 858.
lens var. *longus* n. var., Matthew, 858.
lens-primus, Matthew, 854.
pristinus, Matthew, 854.
pulcher, Matthew, 854.
refulgens, Matthew, 854.
torrentis, Matthew, 854.
torrentis n. sp., Matthew, 858.
triparilis, Matthew, 854.
triparilis n. sp., Matthew, 858.

Paleontology—Continued.

Genera and species described—Continued.

- Ocenebra* Leach, Arnold, 38.
barbarensis Gabb, Arnold, 38.
foveolata Hinds, Arnold, 38.
interfossa Carpenter, Arnold, 38.
keepi n. sp., Arnold, 38.
lurida Middendorf, Arnold, 38.
lurida Midd., var. *aspera* Baird, Arnold, 38.
lurida Midd., var. *cancellina* Philippi, Arnold, 38.
lurida Midd., var. *ceritensis* n. var., Arnold, 38.
lurida Midd., var. *munda* Carpenter, Arnold, 38.
micheli Ford, Arnold, 38.
perita Hinds, Arnold, 38.
poulsoni Nuttall, Arnold, 38.
Odontopleura parvula (Wale.)?, Weller, 1291.
Odontopteris papilionacea n. sp., White, 1296.
Odostomia Fleming, Arnold, 38.
(Oscilla) aquisculpta Carpenter, Arnold, 38.
? *cretacea* n. sp., Whiteaves, 1308.
(Chrysallida) diegensis D. & B., n. sp., Arnold, 38.
? *inornata* n. sp., Whiteaves, 1308.
(Evalea) gouldii Carpenter, Arnold, 38.
(Oscilla) grammatospira D. & B., n. sp., Arnold, 38.
(Amaura) nuciformis, var. *avellana* Carpenter, Arnold, 38.
(Amaura) pupiformis Carpenter, Arnold, 38.
(Evalea) stearnsii D. & B., n. sp., Arnold, 38.
tenuis Carpenter, Arnold, 38.
(Ivara) terrieula (Carpenter) D. & B., Arnold, 38.
Ogmophus arenarum n. sp., Douglass, 317.
Olbodotes Osborn, Wortman, 1355.
Olcostephanus (? *Simbirskites* Pavlov and Lamplugh) n. sp., Madsen, 836.
Olenellus thompsoni (Hall), Weller, 1291.
? sp. und., Weller, 1291.
Oligoporus? *minutus* Beede, Beede, 64.
Oligosimus Leidy, Williston, 1325.
Olivanites, Hambach, 498.
Olivella Swainson, Arnold, 38.
affluens n. sp., Casey, 178.
biplicata Sowerby, Arnold, 38.
intorta Carpenter, Arnold, 38.
pedroana Conrad, Arnold, 38.
Omphalius Philippi, Arnold, 38.
Ontaria n. gen., Clarke, 200.
accincta n. sp., Clarke, 200.
affiliata n. sp., Clarke, 200.
clarkei Beushausen (sp.), Clarke, 200.
concentrica von Buch, Clarke, 200.
halli n. sp., Clarke, 200.
pontiaca n. sp., Clarke, 200.
suborbicularis Hall (sp.), Clarke, 200.
Opalia H. and A. Adams, Arnold, 38.
anomala Stearns, Arnold, 38.
borealis Gould, Arnold, 38.

Paleontology—Continued.

Genera and species described—Continued.

- Opalia crenatoides* Carpenter, var. *inseulpta* Carpenter, Arnold, 38.
varicostata Stearns, Arnold, 38.
Ophileta complanata Vanuxem, Cleland, 208.
levata Vanuxem, Cleland, 208.
? sp. undet., Weller, 1291.
Ophthalmosaurus, Merriam, 882.
Orbiculoidea ampla (Hall), Weller, 1291.
convexa (Shumard), Beede, 64.
jervensis Barrett, Weller, 1291.
lamellosa (Hall), Weller, 1291.
manhattanensis (Meek and Hayden), Beede, 64.
manhattanensis Meek and Hayden, Girty, 455.
missouriensis (Shumard), Beede, 64.
Orbicella? *texana* n. sp., Vaughan, 1244.
Orbiculoidea sp., Girty, 455.
sp. undet., Weller, 1291.
Orbiculus Megerle, Dall, 261.
Oreodon macrorhinus n. sp., Douglass, 317.
Oricardinus sheari Cope, Hay, 517.
tortus Cope, Hay, 517.
Ornithoides n. gen., Matthew, 859.
Ornitholestes hermanni n. gen. and sp., Osborn, 945.
Ornithostoma, Langley, 766.
Ornithostoma, Lucas, 817.
Orodus intermedius n. sp., Eastman, 337.
Orophosaurus Cope, Williston, 1325.
Orthis flabellites Foerste, Weller, 1291.
lenticularis Dalman, Matthew, 858.
newtonensis n. sp., Weller, 1291.
(Dalmanella) testudinaria, Hayes and Ulrich, 533.
tricenaria Conrad, Weller, 1291.
Orthisina alberta Walcott, Matthew, 857.
Orthoceras erebescens Hall, Clarke and Ruedemann, 204.
nuntium Hall, Loomis, 809.
primigenium Vanuxem, Cleland, 208.
rectum Worthen, Clarke and Ruedemann, 204.
scintilla Hall (?), mut. *mephisto* Clarke, Loomis, 809.
subulatum Hall, mut. *pygmæum* nov., Loomis, 809.
tenuistriatum (Hall), Weller, 1291.
tenuitextum (Hall), Weller, 1291.
trusitum n. sp., Clarke and Ruedemann, 204.
sp. undet., Weller, 1291.
Orthodesma canaliculatum Ulrich, 1291.
Orthonychia formosa Keyes?, Girty, 455.
Orthostrophia strophomenoides (Hall), Weller, 1291.
Orthothetes deekensis n. sp., Weller, 1291.
inaequalis Hall, Girty, 455.
interstriatus (Hall), Weller, 1291.
pandora (Bill.), Weller, 1291.
woolworthana (Hall), Weller, 1291.
sp. undet., Weller, 1291.
Orthotichia schuchertensis n. sp., Girty, 455.
Oryctomya elaiornensis Dall, Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Oscilla A. Adams, Arnold, 38.
 Osmeroides Agassiz, Loomis, 808.
 evolutus Cope?, Loomis, 808.
 polymicrodus Stewart, Loomis, 808.
 Osmundites skidegatensis n. sp., Penhallow, 966.
 skidegatensis Penh., Penhallow, 967.
 Ostrea (Linné) Lamarek, Arnold, 38.
 anomoides var. nanus n. var., Johnson, 647.
 eduliformis Schlothheim, Madsen, 836.
 lugubris Conrad, Johnson, 647.
 lurida Carpenter, Arnold, 38.
 sp., Shattuck, 1098.
 Ovula symmetrica n. sp., Aldrich, 16.
 Oxydiscus cristatus Safford, Hayes and Ulrich, 533.
 subacutus Ulrich, Weller, 1291.
 Pachydiscus binodatus n. sp., Whiteaves, 1308.
 haradai Jimbo, Whiteaves, 1308.
 multisulcatus n. sp., Whiteaves, 1308.
 necvesii n. sp., Whiteaves, 1308.
 newberryanus Meek sp., Whiteaves, 1308.
 otacodensis Stoliczka sp., Whiteaves, 1308.
 (haradai? var.) perplicatus, Whiteaves, 1308.
 suciensis Meek sp., Whiteaves, 1308.
 Pachydesma Conrad, Dall, 261.
 Pachymya austinensis (?) Shumard, Shattuck, 1098.
 Pachypoma Gray, Arnold, 38.
 inequale Martyn, Arnold, 38.
 Pachyrhizodus Agassiz, Hay, 517.
 Pachyrhizodus Dixon, Loomis, 808.
 Pachyrhizodus Dixon, Stewart, 1186.
 caninus Cope, Hay, 517.
 caninus Cope, Loomis, 808.
 caninus, Cope, Stewart, 1186.
 curvatus n. sp., Loomis, 808.
 ferox Stewart, Loomis, 808.
 latimentum Cope, Loomis, 808.
 latimentum ? Cope, Stewart, 1186.
 leptognathus Stewart, Loomis, 808.
 leptognathus Stewart, Stewart, 1186.
 leptopsis Cope, Hay, 517.
 leptopsis Cope, Loomis, 808.
 leptopsis Cope, Stewart, 1186.
 minus Stewart, Stewart, 1186.
 sheari Cope, Loomis, 808.
 velox Stewart, Stewart, 1186.
 Palæarctomys n. gen., Douglass, 317.
 macrorhinus n. sp., Douglass, 317.
 montanus n. sp., Douglass, 317.
 Palæobolus, Matthew, 858.
 bretonensis, Matthew, 858.
 Palæochaeta devonica nov., Clarke, 199.
 Palæohatteria Credner, Osborn, 948.
 Palæoecorystes harveyi Woodward, Whiteaves, 1308.
 Palæolagus brachyodon, n. sp., Matthew, 863.
 temnodon Douglas, Matthew, 863.
 Palæomeryx? borealis?, Douglass, 317.
 Palæoneilo brevicula n. sp., Clarke, 200.
 constricta Conrad, Clarke, 200.
 constricta Conrad mut. pygmæa nov., Clarke, 809.

Paleontology—Continued.

Genera and species described—Continued.

- Palæoneilo emarginata (Con.), Weller, 1291.
 linguata n. sp., Clarke, 200.
 muricata n. sp., Clarke, 200.
 petila n. sp., Clarke, 200.
 plana Hall, mut. pygmæa nov., Loomis, 809.
 Palæotrochus Hall, Clarke, 200.
 præcursor Clarke, Clarke, 200.
 Paliurus integrifolius Hollick (?), Berry, 76.
 Paludestrina d'Orbigny, Arnold, 38.
 curta n. sp., Arnold, 38.
 stokesi n. sp., Arnold, 38.
 Pandora, Arnold, 38.
 Pandora Hwass, Dall, 261.
 (Kennerleyia) arctica n. sp., Dall, 261.
 (Kennerleyia) arenosa Conrad, Dall, 261.
 (Kennerleyia) bicarinata Carpenter, Arnold, 38.
 (Clidiophora) crassidens Conrad, Dall, 261.
 (Kennerleyia) dodona n. sp., Dall, 261.
 (Kennerleyia) filosa Carpenter, Arnold, 38.
 (Clidiophora) gouldiana Dall, Dall, 261.
 (Kennerleyia) lata n. sp., Dall, 261.
 (Heteroclidus) punctata Conrad, Dall, 261.
 (Clidiophora) trilineata Say, Dall, 261.
 Panomya Gray, Arnold, 38.
 ampla Dall, Arnold, 38.
 Panopea Ménard, Arnold, 38.
 concentrica Gabb, var., Whiteaves, 1308.
 generosa Gould, Arnold, 38.
 Pantosaurus Marsh, Williston, 1325.
 Paphia Bolten, Dall, 261.
 section Baroda Stoliczka, Dall, 261.
 section Callithaca Dall, Dall, 261.
 section Icanotia Stoliczka, Dall, 261.
 section Myrsus H. and A. Adams, Dall, 261.
 section Paphia Bolten s. s., Dall, 261.
 section Paratapes Dall, Dall, 261.
 section Polititapes Chiamenti, Dall, 261.
 section Protapes Dall, Dall, 261.
 section Pullastra Sowerby, Dall, 261.
 section Ruditapes Chiamenti, Dall, 261.
 section Tapes Megerle s. s., Dall, 261.
 Parabolina dawsoni, Matthew, 858.
 Parabolina? cf. limitis Brög., Matthew, 858.
 ? quadrata, Matthew, 858.
 Paracardium Barrande, Clarke, 200.
 delicatula n. sp., Clarke, 200.
 doris Hall, Clarke, 200.
 Paracyathus granulosus Vaughan, Vaughan, 1243.
 pedroensis Vaughan n. sp., Arnold, 38.
 Paracyclas lirata Conrad, mut. pygmæa nov., Loomis, 809.
 Paralegoceras Hyatt, Smith, 1137.
 baylorense White, Smith, 1137.
 iowense Meek and Worthen, Smith, 1137.
 newsomi n. sp., Smith, 1137.
 texanum Shumard, Smith, 1137.
 Paramylodon n. gen., Brown, 134.
 nebrascensis n. sp., Brown, 134.
 Paraptix n. gen., Clarke, 200.
 ontario n. sp., Clarke, 200.
 Parasmilia texana n. sp., Vaughan, 1244.
 Parastarte Conrad, Dall, 261.
 triquetra Conrad, Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Parastarte hemiplicata (Hall), Weller, 1291.
 Parataptes Stoliczka, Dall, 261.
 Paratissotia n. gen., Hyatt, 625.
 Parmulina Dall, Dall, 261.
 Parvilucina Dall, Dall, 261.
 Patella sp., Shattuck, 1098.
 Patellostium bellum Keyes, Girty, 455.
 ourayense Gurley, Girty, 455.
 Patinopecten Dall, Arnold, 38.
 Pecopteris arborescens (Schloth.) Brongn.,
 White, 1296.
 (Cheilanthes) sepulta Newb. (?), Hollick,
 591.
 Pecten Müller, Arnold, 38.
 (Pecten) bellus Conrad, Arnold, 38.
 (Patinopecten) canrinus Gould, Arnold,
 38.
 (Patinopecten) expansus Dall, Arnold, 38.
 (Pecten) dentatus Sowerby, Arnold, 38.
 duplicicosta (?) Roemer, Shattuck, 1098.
 (Hinnites) giganteus Gray, Arnold, 38.
 (Chlamys) hastatus Sowerby, Arnold, 38.
 (Pecten) hemphilli Dall, Arnold, 38.
 (Chlamys) hericeus Gould, Arnold, 38.
 (Chlamys) hericeus var. stratagus Dall,
 Arnold, 38.
 (Chlamys) jordani n. sp., Arnold, 38.
 (Chlamys) latiauritus Conrad, Arnold, 38.
 (Chlamys) latiauritus Con., var. fragilis
 n. var., Arnold, 38.
 (Chlamys) latianritus Con., var. mono-
 timeris Con., Arnold, 38.
 (Plagioctenium) newsomi n. sp., Arnold,
 38.
 (Chlamys) opuntia Dall, Arnold, 38.
 quinquecostatus? (Sowerby), Shattuck,
 1098.
 roemeri (Hill), Shattuck, 1098.
 (Pecten) stearnsii Dall, Arnold, 38.
 (Pseudamysium) subminutus n. sp., Ald-
 rich, 16.
 (Nodipecten) subnodosus Sowerby, Ar-
 nold, 38.
 (Plagioctenium) subventricosus Dall,
 Arnold, 38.
 texanus Roemer, Shattuck, 1098.
 (Plagioctenium) ventricosus Sowerby,
 Arnold, 38.
 sp., Madsen, 836.
 Pectunculus veatchii Gabb sp., Whiteaves,
 1308.
 Pelecypora Dall, Dall, 261.
 Pentacrinus sp. cf. andreae de Loriol, Madsen,
 836.
 Pentameris circularis n. sp., Weller, 1291.
 Pentremites Say, Hambach, 498.
 abbreviatus Hambach, Hambach, 498.
 angustus n. sp., Hambach, 498.
 bradleyi Meek, Hambach, 498.
 calycinus Lyon, Rowley, 481.
 cherokeus? Troost, Rowley, 481.
 chesterensis Hambach, Rowley, 481.
 conoideus Hall, Hambach, 498.
 conoideus Hall, Rowley, 481.
 florealis v. Schlotheim, Hambach, 498.

Paleontology—Continued.

Genera and species described—Continued.

- Pentremites godoni De France, Rowley, 481.
 kirki n. sp., Hambach, 498.
 koninekanus Hall, Rowley, 481.
 leda Hall, Loomis, 809.
 obesus Lyon, Rowley, 481.
 obtusus n. sp., Hambach, 498.
 pyriformis Say, Hambach, 498.
 pyriformis Say, Rowley, 481.
 robustus Lyon, Rowley, 481.
 rusticus n. sp., Hambach, 498.
 serratus n. sp., Hambach, 498.
 sulcatus Roemer, Hambach, 498.
 sulcatus? Roemer, Rowley, 481.
 tulipaformis n. sp., Hambach, 498.
 turbinatus n. sp., Hambach, 498.
 sp.?, Rowley, 481.
 Peratherium titanelix n. sp., Matthew, 863.
 Pericyclus Mojsisovics, Smith, 1137.
 blairi Miller and Gurley, Smith, 1137.
 ? princeps de Koninek, Smith, 1137.
 Periploma Schumacher, Arnold, 38.
 Periploma Schumacher, Dall, 261.
 angulifera Philippi, Dall, 261.
 argentaria Conrad, Arnold, 38.
 collardi Harris, Dall, 261.
 peralta Conrad, Dall, 261.
 Peripristis semicircularis (Newberry and
 Worthen), Eastman, 337.
 Perisphinctes sp. cf. panderi d'Orbigny, Mad-
 sen, 836.
 Petalodus Owen, Eastman, 337.
 alleghaniensis Leidy, Eastman, 337.
 (Chomatodus) arcuatus (St. John), East-
 man, 337.
 Petricola Lamarek, Arnold, 38.
 carditoides Conrad, Arnold, 38.
 (Petricolaria) cognata C. B. Adams,
 Arnold, 38.
 (Petricolaria) denticulata Sowerby, Ar-
 nold 38.
 (Rupellaria) lamellifera Conrad, Arnold,
 38.
 Petricolaria Stoliczka, Arnold, 38.
 Phacoides Blainville, Dall, 261.
 section Bellucina Dall, Dall, 261.
 section Epilucina Dall, Dall, 261.
 section Gradilucina Cossmann, Dall, 261.
 section Parvilucina Dall, Dall, 261.
 section Pleurolucina Dall, Dall, 261.
 section Cavilucina Fischer, Dall, 261.
 (Bellucina) actinus n. sp., Dall, 261.
 (Lucinoma) acutilineatus Conrad, Dall,
 261.
 (Pleurolucina) amabilis Dall, Dall, 261.
 (Bellucina) amiantus Dall, Dall, 261.
 (Lucinoma) annulatus Reeve, Dall, 261.
 (Pseudomiltha) anodonta Say, Dall, 261.
 (Lucinisca) calhounensis n. sp., Dall, 261.
 (Miltha) caloosensis Dall, Dall, 261.
 (Miltha) chipolanus n. sp., Dall, 261.
 (Miltha) clabornensis Conrad, Dall, 261.
 (Parvilucina) crenulatus Conrad, Dall,
 261.
 (Lucinisca) cribrarius Say, Dall, 261.
 (Here) densatus Conrad, Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Phacoides (Miltha) disciformis Heilprin, Dall, 261.
 domingensis n. sp., Dall, 261.
 (Pseudomiltha) floridanus Conrad, Dall, 261.
 (Pseudomiltha) foremani Conrad, Dall, 261.
 (Here) glenni n. sp., Dall, 261.
 (Here) hamatus n. sp., Dall, 261.
 (Miltha) heracleus, n. sp., Dall, 261.
 (Miltha) hillsboroensis Heilprin, Dall, 261.
 (Parvilucina) intensus n. sp., Dall, 261.
 (Parvilucina) multilineatus Tuomey and Holmes, Dall, 261.
 (Luciniscia) muricatus Spengler, Dall, 261.
 nassula var. caloosana Dall, Dall, 261.
 (Miltha) ocalanus n. sp., Dall, 261.
 (Parvilucina) piluliformis n. sp., Dall, 261.
 (Luciniscia) plesiophus Dall, Dall, 261.
 (Here) podagrinus n. sp., Dall, 261.
 (Parvilucina) prunus n. sp., Dall, 261.
 (Pleurolucina) quadricostatus n. sp., Dall, 261.
 (Cavilucina) recurrens n. sp., Dall, 261.
 (Here) richthofeni Gabb, Dall, 261.
 (Parvilucina) sphaeriolus n. sp., Dall, 261.
 (Here) thionis n. sp., Dall, 261.
 trisulcatus var. multistriatus Conrad, Dall, 261.
 (Bellucina) tuomeyi n. sp., Dall, 261.
 (Bellucina) waccamawensis n. sp., Dall, 261.
 (Here) wacissanus n. sp., Dall, 261.
 (Parvilucina) yaquensis Gabb, Dall, 261.
 (Here) sp. indet., Dall, 261.
 Phacops logani Hall, Weller, 1291.
 rana (Green), Weller, 1291.
 ? sp. undet., Weller, 1291.
 Phandella n. gen., Casey, 178.
 nepionica n. sp., Casey, 178.
 Phanerotrema cf. grayvillense Norwood and Pratten, Girty, 455.
 sp., Girty, 455.
 Phaneta? decorata n. sp., Whiteaves, 1308.
 Phasianella Lamareck, Arnold, 38.
 compta Gould, Arnold, 38.
 Phialocrinus magnificus (Miller and Gurley), Beede, 64.
 Philippina Dall, Dall, 261.
 Phillipsia major Shumard, Girty, 455.
 perocidens Hall and Whitfield, Girty, 455.
 trinucleata Herrick, Girty, 455.
 Phœbodus dens-neptuni n. sp., Eastman, 337.
 knightianus n. sp., Eastman, 337.
 Pholadidea Goodall, Arnold, 38.
 (Penitella) penita Conrad, Arnold, 38.
 Pholadomya angustata Sowerby sp., Madsen, 836.
 claibornensis Meyer and Aldrich, Dall, 261.
 marylandica Conrad, Dall, 261.
 roemerii, n. sp., Shattuck, 1098.

Paleontology—Continued.

Genera and species described—Continued.

- Pholidops arenaria Hall?, Weller, 1291.
 ovata Hall, Weller, 1291.
 Phoreus Risso, Arnold, 38.
 pulligo Martyn, Arnold, 38.
 Phos falsus n. sp., Casey, 178.
 macilentus n. sp., Casey, 178.
 Phragmites (?) cliffwoodensis n. sp., Berry, 76.
 Phragmoceras parvum Hall and Whitfield, Clarke and Ruedemann, 204.
 Phragmolites compressus Con., Weller, 1291.
 Phragmostoma Hall, Clarke, 200.
 chautauquæ n. sp., Clarke, 200.
 incisum Clarke, Clarke, 200.
 natator Hall, Clarke, 200.
 cf. triliratum Hall (sp.), Clarke, 200.
 Phylloceras ramosum Meek, Whiteaves, 1308.
 Phylloporina fenestrata (Hall), Weller, 1291.
 Phymesoda Rafinesque, Dall, 261.
 Physa Daraparnaud, Arnold, 38.
 heterostropha Say, Arnold, 38.
 Physonemus arcuatus M'Coy, Eastman, 337.
 asper nom. nov., Eastman, 337.
 gemmatus (Newberry and Worthen), Eastman, 337.
 hamus-piscatorius n. sp., Eastman, 337.
 pandatus n. sp., Eastman, 337.
 stellatus (Newberry and Worthen), Eastman, 337.
 Pinna peracuta Shumard, Beede, 64.
 subspatulata Worthen, Beede, 64.
 sp., Shattuck, 1098.
 Pinnatopora Vine, Condra, 238.
 trilineata (Meek), Condra, 238.
 pyriformipora Rogers, Condra, 238.
 youngi Ulrich, Condra, 238.
 Pinnopsis Hall, Clarke, 200.
 Pinus mattewanensis n. sp., Berry, 75.
 Piptomerus Cope, Williston, 1325.
 Piratosaurus Leidy, Williston, 1325.
 Pisanía Bivona, Arnold, 38.
 fortis Carpenter, Arnold, 38.
 Pisidium C. Pfeiffer, Dall, 261.
 Pitaria Rocmer (em.), Dall, 261.
 section Hyphantosoma Dall, Dall, 261.
 section Lamelliconcha Dall, Dall, 261.
 section Pitaria s. s., Dall, 261.
 section Tivelina Cossman, Dall, 261.
 (Lamelliconcha) astartiformis Conrad, Dall, 261.
 (Lamelliconcha) calcanea n. sp., Dall, 261.
 (Hyphantosoma) carbacea Guppy, Dall, 261.
 (Lamelliconcha) filosina n. sp., Dall, 261.
 (Hyphantosoma) floridana n. sp., Dall, 261.
 (Lamelliconcha) hillii n. sp., Dall, 261.
 (Hyphantosoma) opisthogrammata n. sp., Dall, 261.
 Placenticeras Meek, Hyatt, 625.
 ? fallax Castillo and Aguilera, Hyatt, 625.
 guadalupæ (Roemer), Hyatt, 625.
 intercalare Meek, Hyatt, 625.
 ? intermedium n. sp., Johnson, 647.
 newberryi n. sp., Hyatt, 625.

Paleontology—Continued.

Genera and species described—Continued.

- Placenticeras planum* n. sp., Hyatt, 625.
placenta (Dekay), Hyatt, 625.
placenta Dekay (sp.)?, Johnson, 647.
 ? *rotundatum* n. sp., Johnson, 647.
pseudoplacenta, Hyatt, 625.
pseudoplacenta var. *occidentale*, Hyatt, 625.
sanearlosense n. sp., Hyatt, 625.
sanearlosense var. *pseudosyrtae*, Hyatt, 625.
spillmani n. sp., Hyatt, 625.
stantoni n. sp., Hyatt, 625.
stantoni var. *bolli*, Hyatt, 625.
whitfieldi n. sp., Hyatt, 625.
whitfieldi var. *tuberculatum*, Hyatt, 625.
syrtae (Morton), Hyatt, 625.
syrtae var. *halci*, Hyatt, 625.
 ? sp. undet., Johnson, 647.
- Placunopsis carbonaria* Meek and Worthen, Beede, 64.
Plagioctenium Dall, Arnold, 38.
Plagiolophus vancouverensis Woodward, Whiteaves, 1308.
Planorbis Guettard, Arnold, 38.
 tumidus Pfeiffer, Arnold, 38.
 vermicularis Gould, Arnold, 38.
Platidia marylandica Clark, Dall, 261.
Platyceeras Conrad, Girty, 455.
 ? *columbiana* n. sp., Weller, 1291.
 gibbosum Hall, Weller, 1291.
 paralium White and Whitfield?, Girty, 455.
 parvum Swallow, Girty, 455.
 tortuosum Hall, Weller, 1291.
 sp. undet., Weller, 1291.
- Platyerinus devonicus* n. sp., Rowley, 481.
 hemisphericus, Grabau, 464.
 huntsville (Troost), Grabau, 464.
- Platygonus bicaratus* Cope, Gidley, 439.
 compressus Le Conte, Wagner, 1252.
 texanus n. sp., Gidley, 439.
- Platymetopus trentonensis* (Con.), Weller, 1291.
- Platyodon* Conrad, Arnold, 38.
 caneellatus Conrad, Arnold, 38.
- Platystoma desmatum* (Clarke), Weller, 1291.
 nearpassi n. sp., Weller, 1291.
 ventricosa Con., Weller, 1291.
- Platysomus circularis* Newberry and Worthen, Eastman, 337.
- Platystrophia biforata*, Cumings, 254.
 biperforata (Schl.), Weller, 1291.
 costata, Cumings, 254.
 laticosta, Cumings, 254.
 lynx, Cumings, 254.
 lynx von Buch, Hayes and Ulrich, 533.
- Platystrophia speciosus* Gabb and Horn, Vaughan, 1242.
- Platystrodon occidentalis* (St. John), Eastman, 337.
- Plectambonites serieus* (Sowerby), Weller, 1291.
- Plectodon* Carpenter, Dall, 261.
- Plectorthis plicatella* (Hall), Weller, 1291.
- Plesiastarte* Fischer, Dall, 261.
- Plesiosaurus gouldii* Williston, Williston, 1325.

Paleontology—Continued.

Genera and species described—Continued.

- Pleuranthus* (Diplodus) *compressus* Newberry, Eastman, 337.
- Pleuroleucina* Dall, Dall, 261.
- Pleuromeris* Conrad, Dall, 261.
- Pleuromya* ? sp., Madsen, 836.
- Pleurophorus angulatus* Meek and Worthen?, Girty, 455.
 costatus (Brown), Beede, 64.
- Pleuropachydiseus hoffmanni* (Gabb), var., Whiteaves, 1308.
- Pleurophorus occidentalis* Meek and Hayden?, Girty, 455.
 subcostatus Meek and Worthen, Beede, 64.
 subcostatus Meek and Worthen, Girty, 455.
 tropidophorus Meek, Beede, 64.
- Pleurotoma* Lamarck, Arnold, 38.
 amiea n. sp., Casey, 178.
 ancilla n. sp., Casey, 178.
 (*Borsonia*) *bartschi* n. sp., Arnold, 38.
 (*Dolichotoma*) *carpenteriana* Gabb, Arnold, 38.
 (*Drillia*) *caseyi* n. sp., Aldrich, 16.
 collaris n. sp., Casey, 178.
 (*Diehotoma*) *cooperi* n. sp., Arnold, 38.
 (*Borsonia*) *dalli* n. sp., Arnold, 38.
 evanescens n. sp., Casey, 178.
 hilgardi n. sp., Casey, 178.
 (*Borsonia*) *hooveri* n. sp., Arnold, 38.
 intacta n. sp., Casey, 178.
 oblivia n. sp., Casey, 178.
 (*Leucosyrinx*) *pedroana* n. sp., Arnold, 38.
 perversa Gabb, Arnold, 38.
 plutonica n. sp., Casey, 178.
 servata Conrad, Casey, 178.
 (*Spirotropsis*) *smithi* n. sp., Arnold, 38.
 (*Dolichotoma*) *tryoniana*, Gabb, Arnold, 38.
 vicksburgensis n. sp., Casey, 178.
- Pleurotomaria capillaria* Conrad cognata mut. (?) nov., Clarke, 200.
 capillaria Conrad, mut. *pygmæa* nov., Loomis, 809.
 ? cf. *carbonaria* Norwood and Pratten, Girty, 455.
 eiliata n. sp., Clarke, 200.
 genundewa n. sp., Clarke, 200.
 hunterensis Cleland, Cleland, 208.
 itylus n. sp., Clarke, 200.
 itys Hall, mut. *pygmæa* nov., Loomis, 809.
 stantoni n. sp., Shattuck, 1098.
 ? sp., Girty, 455.
- Plinthotheca angularis* Lx. sp., White, 1296.
- Poatrephes*?, Douglass, 317.
 paludicola n. gen. and sp., Douglass, 317.
- Pododermus Philippi*, Arnold, 38.
 (*Monia*) *macroschisma* Deshayes, Arnold, 38.
- Podozamites marginatus* Heer, Berry, 76.
- Pœciodus* McCoy, Eastman, 337.
 rugosus Newberry and Worthen, Eastman, 337.
 tribulis (St. John and Worthen), Eastman, 337.
- Poleumita* nom. nov., Clarke and Ruedemann, 204.

Paleontology—Continued.

Genera and species described—Continued.

- Poleumita crenulata* Whiteaves (sp.), Clarke and Ruedemann, 204.
scamnata n. sp., Clarke and Ruedemann, 204.
 (?) *sulcata* Hall (sp.), Clarke and Ruedemann, 204.
Polititapes Chiamenti, Dall, 261.
Polycotylus Cope, Williston, 1325.
ischiadicus n. sp., Williston, 1325.
latipinnis Cope, Williston, 1325.
Polgyrata n. gen., Weller, 1291.
sinistra n. sp., Weller, 1291.
Polymesoda Rafinesque, Dall, 261.
Polynices Montfort, Arnold, 38.
 (Lunatia) *lewisi* Gould, Arnold, 38.
 (Neverita) *recluziana* Petit, Arnold, 38.
Polypora McCoy, Condra, 238.
bassleri Condra, Condra, 238.
cestriensis Ulrich, Ulrich, 238.
crassa Ulrich, Condra, 238.
cf. distincta Ulrich, Girty, 455.
elliptica Rogers, Condra, 238.
remota Condra, Condra, 238.
reversipora Condra, Condra, 238.
spinulifera Ulrich, Condra, 238.
stragula White, Condra, 238.
submarginata Meek, Condra, 238.
ulrichi Condra, Condra, 238.
 n. sp., Girty, 455.
 sp., Girty, 455.
Polystichum hillsianum n. sp., Hollick, 591.
Pomaulax Gray, Arnold, 38.
undusus Wood, Arnold, 38.
Pompholigina Dall, Dall, 261.
Popanoceras Hyatt, Smith, 1137.
ganti n. sp., Smith, 1137.
parkeri Heilprin, Smith, 1137.
walcotti White, Smith, 1137.
Populites tenuifolius n. sp., Berry, 76.
Populus daphnogenoides Ward, Penhallow, 967.
obtrita Dn., Penhallow, 967.
Poromya jamaicensis n. sp., Dall, 261.
mississippiensis Meyer and Aldrich, Dall, 261.
Portheus Cope, Loomis, 808.
Posidonia Bronn, Clarke, 200.
attica Williams (sp.), Clarke, 200.
mesacostalis Williams (sp.), Clarke, 200.
venusta Münster, var. *nitidula* n. var., Clarke, 200.
Posidoniella pertenuis Beede ?, Girty, 455.
Posidonomya ? pertenuis Beede, Beede, 64.
 ? *recurva* Beede, Beede, 64.
Potamides tenuis Gabb, Whiteaves, 1308.
Poterioceras sauridensis n. sp., Clarke and Ruedemann, 204.
 sp., Clarke and Ruedemann, 204.
Præcardium Barrande, Clarke, 200.
duplicatum Münster (sp.), Clarke, 200.
melletes n. sp., Clarke, 200.
multicostatum n. sp., Clarke, 200.
vetustum Hall, Clarke, 200.
Prasopora patera Ulrich and Bassler, Hayes and Ulrich, 533.
simulatrix Ulrich, Weller, 1291.

Paleontology—Continued.

Genera and species described—Continued.

- Priene* H. & A. Adams, Arnold, 38.
Prionoceras ? Hyatt, Smith, 1137.
 ? *andrewsi* Winchell, Smith, 1137.
 ? *brownense* Miller, Smith, 1137.
 ? *ohioense* Winchell, Smith, 1137.
Prionoeyclus macombi Meek, Johnson, 647.
wyomingensis Meek, Johnson, 647.
 n. sp., Johnson, 647.
Prionotropis woolgari Mantell (sp.), Johnson, 647.
Prismatophyllum inæqualis (Hall), Weller, 1291.
Prismopora serrata Meek, Girty, 455.
triangulata White, Girty, 455.
 sp., Girty, 455.
Probaena n. gen., Hay, 515.
sculpta n. sp., Hay, 516.
Prochaasma Benshausen, Clarke, 200.
Productella concentrica Hall, Girty, 455.
spinulicosta Hall, mut. *pygmæa* nov., Loomis, 809.
Productus Sowerby, Beede, 64.
cora d'Orbigny, Beede, 64.
cora d'Orbigny, Girty, 455.
cora americanus Swallow, Beede, 64.
eostatus Sowerby, Beede, 64.
gallatinensis Girty, Girty, 455.
inflatus McChesney, Girty, 455.
lævicosta White, Girty, 455.
longispinus Sowerby ?, Beede, 64.
nebrascensis Owen, Beede, 64.
nebrascensis Owen, Girty, 455.
parviformis Girty, Girty, 455.
pertenuis Meek, Beede, 64.
pertenuis Meek ?, Girty, 455.
portlockianus Norwood and Pratten, Girty, 455.
punctatus (Martin), Beede, 64.
punctatus Martin, Girty, 455.
cf. pustulosus Phillips, Girty, 455.
semireticulatus (Martin), Beede, 64.
semireticulatus var., Girty, 455.
semireticulatus var. *hermosanus* n. var., Girty, 455.
symmetricus McChesney, Beede, 64.
 sp., Girty, 455.
Prodromites Smith and Weller, Smith, 1137.
gorbyi Miller, Smith, 1137.
ornatus n. sp., Smith, 1137.
præmaturus Smith and Weller, Smith, 1137.
Profischeria Dall, Dall, 261.
Proetus brevimarginatus n. sp., Weller, 1291.
 ? *depressus* n. sp., Weller, 1291.
latimarginatus n. sp., Weller, 1291.
pachydermatus Barrett, Weller, 1291.
protuberans Hall, Weller, 1291.
 ? *spinosa* n. sp., Weller, 1291.
 sp., Clarke and Ruedemann, 204.
Prolecanites Mojsisovics, Smith, 1137.
 ? *compactus* Meek and Worthen, Smith, 1137.
greenii Miller, Smith, 1137.
gurleyi n. sp., Smith, 1137.
houghtoni Winchell, Smith, 1137.
 ? *louisianensis* Rowley, Smith, 1137.

Paleontology—Continued.

Genera and species described—Continued.

- Prolecanites lyoni* Meek and Worthen, Smith, 1137.
marshallensis Winchell, Smith, 1137.
Promerycochærus minor n. sp., Douglass, 317.
Pronorites Mojsisovics, Smith, 1137.
cyclolobus Phillips, var. *arkansensis*, Smith, 1137.
siebenthali n. sp., Smith, 1137.
Protapes Dall, Dall, 261.
Protengonoceras Hyatt, Hyatt, 625.
? *emarginatum* (Cragin), Hyatt, 625.
gabbii (Böhm), Hyatt, 625.
planum n. sp., Hyatt, 625.
Proteoides daphnogenoides Heer, Berry, 76.
Proterix loomisii n. gen. and sp., Matthew, 864.
Prothyris truncata n. sp., Cleland, 207.
Protocalyptraea Clarke, Clarke, 200.
marshalli Clarke, Clarke, 200.
styliophila Clarke, Clarke, 200.
Protocardia Beyrich, Arnold, 38.
centifilosa Carpenter, Arnold, 38.
Protonympha salicifolia nov., Clarke, 199.
Protophragmoceras patronus n. sp., Clarke and Ruedemann, 204.
Protorosaurus v. Meyer, Osborn, 948.
Protosphyrena Leidy, Loomis, 808.
Protosphyrena Leidy, Stewart, 1186.
bentoniana, Stewart, Stewart, 1186.
dimidiata (Cope), Hay, 517.
gigas Stewart, Stewart, 1186.
gladius (Cope), Hay, 517.
nitida (Cope), Hay, 517.
nitida Cope, Loomis, 808.
obliquidens n. sp., Loomis, 808.
penetrans Cope, Loomis, 808.
penetrans Cope, Stewart, 1186.
perniciosa (Cope), Hay, 517.
recurvirostris Stewart, Stewart, 1186.
sequax n. sp., Hay, 517.
tenuis n. sp., Loomis, 808.
tenuis Loomis, Hay, 517.
ziphioides (Cope), Hay, 517.
n. sp. ?, Stewart, 1186.
Protospiralis n. gen., Clarke, 200.
minutissima Clarke, Clarke, 200.
Protothaca Dall, Dall, 261.
Protowartha cancellata (Hall), Weller, 1291.
rossi n. sp., Collie, 228.
tenuissima n. sp., Collie, 228.
Psammobia (Lamarck) Boyditch, Arnold, 38.
(*Psammobia*) *edentula* Gabb, Arnold, 38.
sp. ?, Raven, 996.
Psephidia Dall, Dall, 261.
Psephis Carpenter, Arnold, 38.
salmonæa Carpenter, Arnold, 38.
tantilla Carpenter, Arnold, 38.
Pseudaspidoceras n. gen., Hyatt, 625.
Pseudobradypus n. gen., Matthew, 859.
Pseudocrinites clarki n. sp., Schuchert, 1091.
gordonii n. sp., Schuchert, 1091.
perdewi n. sp., Schuchert, 1091.
stellatus n. sp., Schuchert, 1091.
Pseudocyrena Bourguignat, Dall, 261.
Pseudomiltha Fischer, Dall, 261,

Paleontology—Continued.

Genera and species described—Continued.

- Pseudomonotis equistriata* Beede, Girty, 455.
hawni (Meek and Hayden), Beede, 64.
hawni Meek and Hayden, Girty, 455.
hawni equistriata Beede, Beede, 64.
kansasensis Beede, Girty, 455.
kansasensis nom. nov., Beede, 64.
? *robusta* Beede, Beede, 64.
sp., Girty, 455.
Pseudonæra Sturany, Dall, 261.
Pseudopteronodon minutus (Douglas), Matthew, 863.
Pseudosphærexochus trentonensis Clarke, Weller, 1291.
Pseudothyrtodius n. gen., Loomis, 808.
intermedius n. sp., Loomis, 808.
Pseudotsuga miocena Penll., Penhallow, 968.
miocena n. sp., Penhallow, 967.
Pteranodon Marsh, Eaton, 341.
Pterculima n. gen., Casey, 177.
elegans n. sp., Casey, 177.
Pteria longa (Geinitz), Beede, 64.
sulcata (Geinitz), Beede, 64.
Pterinea emacrata (Con.), Weller, 1291.
flabella (Con.), Weller, 1291.
subplana Hall (sp.), Clarke and Ruedemann, 204.
undata Hall (sp.), Clarke and Ruedemann, 204.
? sp. undet., Weller, 1291.
Pterochænia n. gen., Clarke, 200.
cashaque n. sp., Clarke, 200.
elmensis n. sp., Clarke, 200.
fragilis Hall (sp.), Clarke, 200.
fragilis Hall (sp.) var. *orbicularis* n. var., Clarke, 200.
perissa n. sp., Clarke, 200.
sinuosa n. sp., Clarke, 200.
Pteronites? *subplana* (Hall), Weller, 1291.
Pteromeris Conrad, Dall, 261.
Pteronotus Swainson, Arnold, 38.
Pterorhytis Conrad, Arnold, 38.
Pterotheca expansa (Emm.)?, Weller, 1291.
Pterygometopus callicephalus (Hall), Weller, 1291.
intermedius (Walcott)?, Weller, 1291.
Pterygotus monroensis n. sp., Sarle, 1070.
Ptilodictya frondosa n. sp., Weller, 1291.
lobata n. sp., Weller, 1291.
Ptychodus, Williston, 1330.
anonymus Williston, Williston, 1330.
janewayii (Cope), Williston, 1330.
martini Williston, Williston, 1330.
mortoni (Mantell), Williston, 1330.
occidentalis Leidy, Williston, 1330.
polygyrus (Buckland), Williston, 1330.
whippleyi Marcou, Williston, 1330.
sp., Williston, 1330.
Ptychomyia ragsdalei (Cragin), Shattuck, 1098.
Ptychoparia blairi n. sp., Weller, 1291.
calcifera Walcott?, Weller, 1291.
newtonensis n. sp., Weller, 1291.
sp. undet., Weller, 1291.
? *subquadrata* n. sp., Weller, 1291.
Ptychopyge jerseyensis n. sp., Weller, 1291.

Paleontology—Continued.

Genera and species described—Continued.

- Puella* sp., Clarke, 200.
Pugnax rockymontana (Marcou), Beede, 64.
 utah (Marcou), Beede, 64.
 utah Marcou, Girty, 455.
Pullastra Sowerby, Dall, 261.
Puncturella Lowe, Arnold, 38.
 cucullata Gould, Arnold, 38.
 galeata Gould, Arnold, 38.
Purpura Bruguière, Arnold, 38.
 crispata Chemnitz, Arnold, 38.
 saxicola Valenciennes, Arnold, 38.
Pyramidella Lamarek, Arnold, 38.
 conica Adams, var. *variegata* Carpenter, Arnold, 38.
Pyrgisculus Monterosato, Arnold, 38.
Pyrgiscus Philippi, Arnold, 38.
Pyrgolampros Sacco, Arnold, 38.
Quercus hollickii n. sp., Berry, 76.
 holmesii Lesq., Berry, 76.
 ? sp., Johnson, 647.
Radiocrista Dall, Dall, 261.
Raeta Gray, Arnold, 38.
Rafinesquina alternata (Emm.), Weller, 1291.
 alternata var. *ponderosa*, Hayes and Ulrich, 533.
Ranella Lamarek, Arnold, 38.
 californica Hinds, Arnold, 38.
Raphistoma columbiana n. sp., Weller, 1291.
 peracutum U. & S., Weller, 1291.
Receptaculites occidentalis Salter, Weller, 1291.
Remondia Gabb, Dall, 261.
Rensselaeria subglobosus n. sp., Weller, 1291.
Retecograptus geinitzianus Hall, Weller, 1291.
Reticularia bicostata (Vanuxem), Weller, 1291.
 fimbriata (Con.), Weller, 1291.
 perplexa (McChesney), Beede, 64.
Rhamnacinium porcupinianum n. sp., Penhallow, 968.
 triseriatum n. sp., Penhallow, 968.
Rhamnus novæ-Cesariæ n. sp., Berry, 76.
Rhinellus tenuirostris (Cope), Hay, 517.
Rhinidietya sp. undet., Weller, 1291.
Rhinoclama Dall and Smith, Dall, 261.
Rhipidomella eminens (Hall), Weller, 1291.
 sp. cf. *musculosa* (Hall), Weller, 1291.
 oblata (Hall), Weller, 1291.
 pecosi (Marcou), Beede, 64.
 pecosi Marcou, Girty, 455.
 preoblata n. sp., Weller, 1291.
 pulchella Herrick, Girty, 455.
 vanuxemi (Hall), Weller, 1291.
Rhodocrinus sp., Girty, 455.
Rhombopora Meek, Condra, 238.
 lepidodendroides Meek, Condra, 238, 239.
 lepidodendroides Meek, Girty, 455.
Rhombopteria clathratus n. sp., Weller, 1291.
 clathratus var., Weller, 1291.
Rhynchonella Fischer de Waldheim, Dall, 261.
 agglomerata n. sp., Decker, 1291.
 altiplicata Hall, Weller, 1291.
 bialveata Hall, Weller, 1291.
 breviplicata n. sp., Weller, 1291.

Paleontology—Continued.

Genera and species described—Continued.

- Rhynchonella deckerensis* n. sp., Decker, 1291.
 holmesii n. sp., Dall, 261.
 (?) *litchfieldensis* n. sp., Schuchert, 1089.
 salpinx n. sp., Dall, 261.
 semiplicata (Con.), Weller, 1291.
 suciensis Whiteaves, Whiteaves, 1308.
 transversa Hall, Weller, 1291.
Rhynchospira excavata n. sp., Grabau, 465.
 formosa Hall, Weller, 1291.
Rhynchotrema dentata (Hall), Weller, 1291.
 formosa (Hall), Weller, 1291.
 formosa (Hall)?, Weller, 1291.
 inaequivalvis (Castel.), Weller, 1291.
 increbescens (Hall), Hayes and Ulrich, 533.
Rhynchotrema cuneata americana Hall, Clarke and Ruedemann, 204.
 transversa n. sp., Weller, 1291.
Ribeiria parva n. sp., Collic, 228.
turgida n. sp., Cleland, 208.
 sp., (?), Cleland, 208.
Rietaxis Dall, Arnold, 38.
Rietocyma Dall, Dall, 261.
Ringicardium Fischer, Arnold, 38.
Rissoa Fréminville, Arnold, 38.
 acutellirata Carpenter, Arnold, 38.
Romingeria commutata n. sp., Beecher, 63.
 jacksoni n. sp., Beecher, 63.
 minor n. sp., Beecher, 63.
 ? *trentonensis* n. sp., Weller, 1291.
 umbellifera (Billings), Beecher, 63.
 cf. *umbellifera*, Sardeson, 1068.
Rostellaria? *texana* Conrad, Johnson, 647.
Rostellites cf. *ambigua* Stanton, Johnson, 647.
 dalli var. *wellsi* n. var., Johnson, 647.
Ruditapes Chiamenti, Dall, 261.
Rupellaria Fleurian, Arnold, 38.
Saccoblastus Hambach, 498.
 ventricosus n. sp., Hambach, 498.
Sagenodus cristatus n. sp., Eastman, 337.
 pertenuis n. sp., Eastman, 338.
Sagenopteris nilsoniana (Brongn.), Ward, Penhallow, 967.
 oblongifolia n. sp., Penhallow, 967.
Salix mattewanensis n. sp., Berry, 76.
 proteæfolia flexuosa (Newb.) Lesq., Berry, 76.
Samarangia Dall, Dall, 261.
Sandalodus carbonarius Newberry and Worthen, Eastman, 337.
 lævissimus Newberry and Worthen, Eastman, 337.
Sanguinolaria (Nuttallia) nuttalli Conrad, Arnold, 38.
Sapindus morrisoni Lesq., Berry, 76.
Sardinius? *imbellis* n. sp., Hay, 517.
Sassafras acutilobum Lesq., Berry, 76.
Saurocephalus Harlan, Hay, 517.
Saurocephalus Harlan, Loomis, 808.
Saurocephalus Harlan, Stewart, 1186.
 broadheadi Stewart, Loomis, 808.
 dentatus Stewart, Stewart, 1186.
 goodenianus (Cope), Hay, 517.
 lanceiformis Harlan, Hay, 517.
 lanceiformis Harlan, Loomis, 808.

Paleontology—Continued.

Genera and species described—Continued.

- Saurocephalus phlebotomus Cope, Hay, 517.
 xiphirostris (Stewart), Hay, 517.
 Saurodon Hays, Loomis, 808.
 Saurodon Hays, Stewart, 1186.
 broadheadi (Stewart), Stewart, 1186.
 ferox Stewart, Stewart, 1186.
 phlebotomus Cope, Loomis, 808.
 phlebotomus (Cope), Stewart, 1186.
 pygmaeus n. sp., Loomis, 808.
 xiphirostris Stewart, Stewart, 1186.
 Saxidomus Conrad, Arnold, 38.
 Saxidomus Conrad, Dall, 261.
 aratus Gould, Arnold, 38.
 Seala Humphrey, Arnold, 38.
 belastrata Carpenter, Arnold, 38.
 crebricostata Carpenter, Arnold, 38.
 indianorum Carpenter, Arnold, 38.
 hemphilli, Dall, Arnold, 38.
 hindsii Carpenter, Arnold, 38.
 tineta Carpenter, Arnold, 38.
 Scapanorhynchus Woodward, Williston, 1330.
 rhapsiodon (Agassiz), Williston, 1330.
 Scaphiocrinus? washburni Beede, Beede, 64.
 Scaphites warreni M. and H., Johnson, 647.
 Scenidium anthoneis Sard., Weller, 1291.
 insigne (Hall), Weller, 1291.
 Schistoceras Hyatt, Smith, 1137.
 fultonense Miller and Gurley, Smith, 1137.
 hildrethi Morton, Smith, 1137.
 hyatti n. sp., Smith, 1137.
 missouriense Miller and Faber, Smith, 1137.
 Schizambon priseus, Matthew, 858.
 Schizocrania superincreta Barrett, Weller, 1291.
 Schizodus compressus n. sp., Beede, 64.
 cuneatus Meek?, Girty, 455.
 hari Miller, Beede, 64.
 wheeleri (Swallow), Beede, 64.
 subcircularis Herrick, Beede, 64.
 Schizophoria bisinuata n. sp., Weller, 1291.
 multistriata (Hall), Weller, 1291.
 sp. cf. striatula (Schl.), Weller, 1291.
 Schluetericeras n. gen., Hyatt, 625.
 Schmidella Ulrich, Matthew, 858.
 ? acuta, Matthew, 858.
 ? pervetus, Matthew, 858.
 ? pervetus mut. confinna n. mut., Matthew, 858.
 Schuchertites n. gen., Smith, 1137.
 grahami n. sp., Smith, 1137.
 Scylliorhinus (Lamna?) gracilis Williston, Williston, 1330.
 Sciurus arcetomyoides n. sp., Douglass, 317.
 (Prosciurus) vetustus n. subg. and sp., Matthew, 863.
 sp., Douglass, 317.
 Scobinella famelica n. sp., Casey, 178.
 macer n. sp., Casey, 178.
 pluriplicata n. sp., Casey, 178.
 Scurria? conformis n. sp., Johnson, 647.
 Seutella Lamarek, Arnold, 38.
 (Echinarachnius) excentricus Esch-scholtz, Arnold, 38.

Paleontology—Continued.

Genera and species described—Continued.

- Scylliorhinus planidens Williston, Williston, 1330.
 rugosus (Williston), Williston, 1330.
 Scytalocrinus ornatissimus Hall (sp.), Clarke, 200.
 Sedgwickia topekaensis (Shumard), Beede, 64.
 Seila A. Adams, Arnold, 38.
 assimilata C. B. Adams, Arnold, 38.
 Semele Schumacher, Arnold, 38.
 decisa Conrad, Arnold, 38.
 pulchra Sowerby, Arnold, 38.
 pulchra Sowerby, montereyi n. var., Arnold, 38.
 Semionotus fultus Agassiz, Eaton, 340.
 marshi W. C. Redfield, Eaton, 340.
 micropterus Newberry, Eaton, 340.
 ovatus W. C. Redfield, Eaton, 340.
 tenuiceps Agassiz, Eaton, 340.
 Septifer, Recluz, Arnold, 38.
 bifurcatus Conrad, Arnold, 38.
 Septopora Prout, Condra, 238.
 biserialis (Swallow), Condra, 238.
 biserialis-nervata Ulrich, Condra, 238.
 cestriensis Prout, Condra, 238.
 decipiens Ulrich, Condra, 238.
 multipora (Rogers), Condra, 238.
 pinnata Ulrich, Condra, 238.
 robusta Ulrich, Condra, 238.
 Sequoia burgessii n. sp., Penhallow, 968.
 gracillima (Lesq.) Newb., Berry, 76.
 langsdorffii (Brongn.) Heer, Penhallow, 967, 968.
 reichenbachii (Gein.) Heer, Berry, 76.
 Serpularia Sassi, Arnold, 38.
 squamigerus Carpenter, Arnold, 38.
 (Vermicularia) sp. indet., Arnold, 38.
 Sharpeiceras n. gen., Hyatt, 625.
 Shastasaurus, Merriam, 882.
 Shizocrania filosa (Hall), Weller, 1291.
 Shumardites n. gen., Smith, 1137.
 simondsi n. sp., Smith, 1137.
 Sigaretus Lamarek, Arnold, 38.
 debilis Gould, Arnold, 38.
 Sigillaria brardii coriacea n. var., White, 1296.
 suspecta n. sp., White, 1296.
 Silicia Megerle, Arnold, 38.
 lucida Conrad, Arnold, 38.
 patula (Dixon) var. nuttalli Conrad, Arnold, 38.
 Siphonalia A. Adams, Arnold, 38.
 kellettii Forbes, Arnold, 38.
 Smilodectes n. gen., Wortman, 1355.
 gracilis Marsh, Wortman, 1355.
 Solanderina Dall, Dall, 261.
 Solaricella S. Wood, Arnold, 38.
 eidas A. Adams, Arnold, 38.
 (radiatula? var.) occidentalis, Whiteaves, 1308.

Paleontology—Continued.

Genera and species described—Continued.

- Solariella peramabilis Carpenter, Arnold, 38.
 Solen Linné, Arnold, 38.
 cuneatus Gabb ?, Johnson, 647.
 rosaceus Carpenter, Arnold, 38.
 sicarius Gould, Arnold, 38.
 Soleniscus cf. paludiniformis Hall, Girty, 455.
 Solenomya parallella Beede and Rogers, Beede, 64.
 radiata Meek and Worthen, Beede, 64.
 trapezoides Meek, Beede, 64.
 Solenopleura bretonensis n. sp., Matthew, 858.
 jerseyensis Weller, Weller, 1291.
 Somphospongia Beede, Beede, 64.
 multiformis Beede, Beede, 64.
 Spaniodon simus Cope, Hay, 517.
 Sphaeriastrum Bourguignat, Dall, 261.
 Sphaerium Scopoli, Dall, 261.
 Sphaerocystites Hall, Schuchert, 1091.
 globularis n. sp., Schuchert, 1091.
 Sphaerophthalmus alatus Boeck, Matthew, 858.
 fletcheri, Matthew, 858.
 Spheniopsis Sandberger, Dall, 261.
 americana n. sp., Dall, 261.
 Sphenodiscus Meek, Hyatt, 625.
 beccheri n. sp., Hyatt, 625.
 lenticularis (Owen), Hyatt, 625.
 lenticularis var. mississippiensis, Hyatt, 625.
 lenticularis var. splendens, Hyatt, 625.
 lobatus (Tuomey), Hyatt, 625.
 pleurisepta (Conrad), Hyatt, 625.
 stantoni n. sp., Hyatt, 625.
 Sphenodon Günther, Osborn, 948.
 Sphenophyllum emarginatum minor D. W., White, 1296.
 Spirifer, Sowerby, Beede, 64.
 arenosus (Con.), Weller, 1291.
 audaculus (Con.) ?, Weller, 1291.
 boonensis Swallow ?, Girty, 455.
 cameratus Morton, Beede, 64.
 cameratus Morton, Girty, 455.
 centronatus Winchell, Girty, 455.
 concinnus Hall, Weller, 1291.
 corallinensis Grabau, Grabau, 465.
 crispus (Hisinger) Hall, Clarke and Ruedemann, 204.
 cyclopterus Hall, Weller, 1291.
 eriensis Grabau, Schuchert, 1089.
 eriensis Grabau var., Grabau, 465.
 fimbriatus Conrad, mut. pygmæus nov., Loomis, 809.
 fimbriatus Conrad, mut. simplicissimus nov., Loomis, 809.
 granulosus Conrad, mut. pluto Clarke, Loomis, 809.
 macropleurus (Con.), Weller, 1291.
 macrothyris Hall, Weller, 1291.
 marcey Hall, mut. pygmæus nov., Loomis, 809.
 medialis Hall, mut. pygmæus nov., Loomis, 809.
 modestus corallinensis (Grabau), Schuchert, 1089.
 mucronatus Conrad, mut. hecate Clarke, Loomis, 809.

Paleontology—Continued.

Genera and species described—Continued.

- Spirifer murchisoni Castelnau, Weller, 1291.
 nearpassi n. sp., Weller, 1291.
 octocostatus Hall, Weller, 1291.
 perlamellosus Hall, Weller, 1291.
 peculiaris Shumard ?, Girty, 455.
 rockymontanus Marcou, Girty, 455.
 tullius Hall, mut. belphegor Clarke, Loomis, 809.
 vanuxemi Hall, Grabau, 465.
 vanuxemi Hall, Weller, 1291.
 vanuxemi Hall, var. minor n. var., Weller, 1291.
 sp., Girty, 455.
 sp. undet., Weller, 1291.
 Spiriferina campestris White, Girty, 455.
 cristata (Schlothheim), Beede, 64.
 kentuckyensis Shumard, Girty, 455.
 solidirostris White ?, Girty, 455.
 Spiroglyphus lituella Möhrh, Arnold, 38.
 Spirorbis arietina Dawson, Girty, 455.
 sp., Girty, 455.
 Spirotropsis Sars, Arnold, 38.
 Spisula Gray, Arnold, 38.
 Spoudylus (sp. uncertain), Whiteaves, 1308.
 sp., Shattuck, 1098.
 Squamularia Gemmellaro, Girty, 455.
 perplexa McChesney, Girty, 455.
 Stantonoceras n. gen., Johnson, 647.
 pseudocostatum n. sp., Johnson, 647.
 guadaloupe Roemer (sp.) ?, Johnson, 647.
 Stemmatoocrinus ? veryi n. sp., Rowley, 482.
 Stenopora Lonsdale, Condra, 238.
 carbonaria (Worthen), Condra, 238.
 carbonaria-conferta Ulrich, Condra, 238.
 cestricus Ulrich, Girty, 455.
 distant Condra, Condra, 238.
 heteropora Condra, Condra, 238.
 ? polyspinosa (provisional) Condra, Condra, 238.
 spinulosa Rogers, Condra, 238.
 tuberculata (Prout), Condra, 238.
 tuberculata, Prout, Girty, 455.
 ? sp., Girty, 455.
 Stenopteris (?) cretacea n. sp., Hollick, 591.
 Stephanocrinus deformis n. sp., Rowley, 480.
 gemmaformis Hall, Rowley, 480.
 hammelli Miller, Rowley, 480.
 osgoodensis Miller, Rowley, 480.
 quinquepartitus n. sp., Rowley, 480.
 Sterculia cliffwoodensis n. sp., Berry, 76.
 mucronata Lesq., Berry, 76.
 snowii bilobata var. nov., Berry, 76.
 Stereosternum Cope, Osborn, 948.
 Stethacanthus Newberry, Eastman, 337.
 altonensis (St. John and Worthen), Eastman, 337.
 depressus (St. John and Worthen), Eastman, 337.
 erectus n. sp., Eastman, 337.
 productus Newberry, Eastman, 337.
 Stibaros montanus n. sp., Matthew, 863.
 Straparollus luxus White, Girty, 455.
 ophircensis Hall and Whitfield, Girty, 455.
 cf. spargenensis Hall, Girty, 455.
 utahensis Hall and Whitfield, Girty, 455.
 sp. undet., Weller, 1291.

Paleontology—Continued.

Genera and species described—Continued.

- Stratodus Cope, Stewart, 1186.
 apicalis Cope, Stewart, 1186.
 oxygon Cope, Hay, 517.
 Streblodus angustus n. sp., Eastman, 337.
 Streblopertia media Herrick, Girty, 455.
 tenuilineata Meek and Worthen, Girty, 455.
 Streblotrypa Ulrich, Condra, 238.
 prisca (Gabb and Horn), Condra, 238.
 Streptelasma corniculum Hall, Weller, 1291.
 strictum Hall, Weller, 1291.
 Striatopora bellistriata n. sp., Greene, 481, 482.
 Strioturbonilla Sacco, Arnold, 38.
 Stromatocerium pustulosum Safford, Hayes and Ulrich, 533.
 Stromatopora constellata Hall, Schuchert, 1089.
 galtensis Dawson (sp.), Clarke and Ruedemann, 204.
 Strongylocentrotus Brandt, Arnold, 38.
 franciscanus A. Agassiz, Arnold, 38.
 purpuratus Stimpson, Arnold, 38.
 Strophalosia truncata Hall, mut. pygmaea nov., Loomis, 809.
 Stropheodonta beckeri Hall, Weller, 1291.
 bipartita (Hall), Weller, 1291.
 indenta (Con.), Weller, 1291.
 inequiradiata Hall, Weller, 1291.
 magnifica (Hall), Weller, 1291.
 perplana (Con.), Weller, 1291.
 planulata Hall, Weller, 1291.
 varistriata (Con.), Weller, 1291.
 varistriata var. arata H., Weller, 1291.
 sp. undet., Weller, 1291.
 Strophomena Rafinesque, Nickles, 932.
 incurvata (Shep.), Weller, 1291.
 planoconvexa Hall, Hayes and Ulrich, 533.
 planumbona (Hall), Nickles, 932.
 Strophonella levenworthana (Hall), Weller, 1291.
 punetilifera (Con.), Weller, 1291.
 Strophostylus gebhardi (Con.), Weller, 1291.
 cf. nanus Meek and Worthen, Girty, 455.
 remex White, Girty, 455.
 subovatus Worthen?, Girty, 455.
 ? sp. undet., Weller, 1291.
 Stylemys calaverensis n. sp., Sinclair, 1117.
 Styliferina A. Adams, Arnold, 38.
 Styliolina fissurella Hall, Clarke, 200.
 Styracoceras n. gen., Hyatt, 625.
 Subpulchellia n. gen., Hyatt, 625.
 Subtissotia n. gen., Hyatt, 625.
 Sunetta Link, Dall, 261.
 section Solanderina Dall, Dall, 261.
 section Sunetta s. s., Dall, 261.
 section Sunettina Jousseume, Dall, 261.
 Sunettina Jousseume, Dall, 261.
 Syllæmus Cope, Stewart, 1186.
 latifrons Cope, Stewart, 1186.
 Syntegmodus n. gen., Loomis, 808.
 altus n. sp., Loomis, 808.
 Syntrophia lateralis (Whitf.), Weller, 1291.
 Syringopora aculeata Girty, Girty, 455.

Paleontology—Continued.

Genera and species described—Continued.

- Syringopora infundibulum Whitfield, Clarke and Ruedemann, 204.
 multattenuata McChesney, Beede, 64.
 surcularia Girty, Girty, 455.
 Syringothyris carteri Hall, Girty, 455.
 Tæniopteris orvillensis Fontaine, Penhallow, 967.
 Tagelus Gray, Arnold, 38.
 californianus Conrad, Arnold, 38.
 Talpa ? platybrachys n. sp., Douglass, 317.
 Tancredia sp. cf. angulata Lycett, Madsen, 836.
 sp., Madsen, 836.
 Tapes Megerle, Arnold, 38.
 Tapes Megerle, Dall, 261.
 laciniata Carpenter, Arnold, 38.
 staminia Conrad, Arnold, 38.
 tenerrima Carpenter, Arnold, 38.
 Taranis Jeffreys, Arnold, 38.
 Taxodium distichum Rich., Penhallow, 968.
 Tegoceras n. gen., Hyatt, 625.
 Tellina (Angelus) bodegensis Hinds, Arnold, 38.
 (Angelus) buttoni Dall, Arnold, 38.
 (Angelus) ida Dall, Arnold, 38.
 nanaimoensis n. sp., Whiteaves, 1308.
 pilsbryi n. sp., Casey, 178.
 (Angelus) rubescens Hanley, Arnold, 38.
 (Moerella) salmonea Carpenter, Arnold, 38.
 sp., Ravn, 996.
 Tellinocyclus Dall, Dall, 261.
 Tentaaculites acula Hall?, Weller, 1291.
 bellulus Hall (?), mut. stebos Clarke, Loomis, 809.
 elongatus Hall, Weller, 1291.
 gracilistriatus Hall, Clarke, 200.
 gracilistriatus Hall, mut. asmodeus Clarke, Loomis, 809.
 gyracanthus (Eaton), Weller, 1291.
 tenuicinctus F. A. Roemer, Clarke, 200.
 Terebra Bruguière, Arnold, 38.
 (Acus) simplex Carpenter, Arnold, 38.
 Terebratalia Beecher, Arnold, 38.
 hemphilli Dall, Arnold, 38.
 smithi n. sp., Arnold, 38.
 Terebratella harveyi n. sp., Whiteaves, 1308.
 Terebratula (Chlidonophora) filosa Conrad, Dall, 261.
 wilmingtonensis Lyell and Sowerby, Dall, 261.
 Teredo sp., Ravn, 996.
 Tetradella (?) sp., Jones, 655.
 Tetragonites timotheanus? Mayor, Whiteaves, 1308.
 Tetranota bidorsata (Hall), Weller, 1291.
 Textivenus Cossman, Dall, 261.
 Thalotia Gray, Arnold, 38.
 caffea Gabb, Arnold, 38.
 Thamniscus King, Condra, 238.
 palmatus (provisional) Condra, Condra, 238.
 pinnatus Condra, Condra, 238.
 sevillensis Ulrich, Condra, 238.

Paleontology—Continued.

Genera and species described—Continued.

- Thecalia H. and A. Adams, Dall, 261.
 Theranopus (?) menaughtoni n. sp., Matthew, 861.
 Theropleura uniformis, Case, 176.
 Thetironia Stoliczka, Dall, 261.
 Thoracoceras wilsoni Clarke, Wilson, 1335.
 Thracia (Leach) Blainville, Arnold, 38.
 Thracia Blainville, Dall, 261.
 section Ixartia Leach, Dall, 261.
 section Thracia s. s., Dall, 261.
 conradi Couthouy, Dall, 261.
 dilleri Dall, Dall, 261.
 transversa Lea, Dall, 261.
 trapezoides Conrad, Arnold, 38.
 Thryptodus n. gen., Loomis, 808.
 rotundus n. sp., Loomis, 808.
 zitteli n. sp., Loomis, 808.
 Thyasira (Leach) Lamarck, Dall, 261.
 section Axinulus Verrill and Bush, Dall, 261.
 section Thyasira s. s., Dall, 261.
 bisecta Conrad, Arnold, 38.
 bisecta Conrad, Dall, 261.
 flexuosa Montagu, Dall, 261.
 gouldi Philippi, Arnold, 38.
 trisinuata Orbigny, Dall, 261.
 Timoclea Brown, Dall, 261.
 Tivela Link, Arnold, 38.
 Tivela Link, Dall, 261.
 section Eutivela Dall, Dall, 261.
 section Pachydesma Conrad, Dall, 261.
 section Tivela s. s., Dall, 261.
 crassatelloides Conrad, Arnold, 38.
 jamaicensis n. sp., Dall, 261.
 (Pachydesma) stultorum Mawe, Dall, 261.
 Tivelina Cossman, Dall, 261.
 Tolypeceras n. gen., Hyatt, 625.
 Toretoenemus n. gen., Merriam, 882.
 californicus n. sp., Merriam, 882.
 Tornatina A. Adams, Arnold, 38.
 cerealii Gould, Arnold, 38.
 culcitella Gould, Arnold, 38.
 eximia Baird, Arnold, 38.
 harpa Dall, Arnold, 38.
 Tornoceras cinctum Keyserling, Clarke, 200.
 uniangulare Conrad, Loomis, 809.
 uniangulare Conrad, mut. astarte Clarke, Loomis, 809.
 Trachycardium Möreh, Arnold, 38.
 Trachypora austini Worthen, Beede, 64.
 oriskania n. sp., Weller, 1291.
 Transennella Dall, Dall, 261.
 caloosana n. sp., Dall, 261.
 carolinensis n. sp., Dall, 261.
 chipolana n. sp., Dall, 261.
 santarosana n. sp., Dall, 261.
 utica n. sp., Dall, 261.
 Trapezium (Humphrey) Mühlfield, Dall, 261.
 claibornense Dall, Dall, 261.
 Trematonotus alpheus Hall, Clarke and Ruedemann, 204.
 Trematospira multistriata Hall, Weller, 1291.
 Tresus Gray, Arnold, 38.
 nuttalli Conrad, Arnold, 38.

Paleontology—Continued.

Genera and species described—Continued.

- Trianaspis Cope, Hay, 517.
 virgulatus Cope, Hay, 517.
 Triarthrus belli, Matthew, 858.
 Triceratops, Beasley, 62.
 serratus Marsh, Lull, 818.
 Tridonta Schumacher, Dall, 261.
 Triforis Deshayes, Arnold, 38.
 adversa Montagu, Arnold, 38.
 Trigenicus socialis n. gen. and sp., Douglass, 317.
 Trigeria lepida Hall, mut. pygmaea nov., Loomis, 809.
 Trigonina emoryi Conrad, Shattuck, 1098.
 evansana Meek, Whiteaves, 1308.
 undulata Fromherz, Madsen, 836.
 Trinacromerum Cragin, Williston, 1325.
 Trinucleus concentricus (Eaton), Weller, 1291.
 Tritonium Link, Arnold, 38.
 cerrillosensis n. sp., Johnson, 648.
 gibbosus Broderip, Arnold, 38.
 kanabense Stanton, Johnson, 647.
 (Priene) oregonensis Redfield, Arnold, 38.
 Trivia Gray, Arnold, 38.
 californica Gray, Arnold, 38.
 solandri Gray, Arnold, 38.
 Trochaetæon semicostatus n. sp., Whiteaves, 1308.
 Trochoceras costatum Hall, Clarke and Ruedemann, 204.
 desplainense McChesney, Clarke and Ruedemann, 204.
 Trochonema cf. fatuum Hall, Clarke and Ruedemann, 204.
 Trochosnillia (?) sp. indet., Vaughan, 1244.
 Trochus sp., Shattuck, 1098.
 Trophon Montfort, Arnold, 38.
 (Boreotrophon) cerritensis n. sp., Arnold, 38.
 (Boreotrophon) gracilis Perry, Arnold, 38.
 (Boreotrophon) multicostatus Eschscholtz, Arnold, 38.
 (Boreotrophon) pedroana n. sp., Arnold, 38.
 (Boreotrophon) scalariformis Gould, Arnold, 38.
 (Boreotrophon) stuarti Smith, Arnold, 38.
 (Boreotrophon) stuarti Smith, var. precursor new var., Arnold, 38.
 (Boreotrophon) tenuisculptus Carpenter, Arnold, 38.
 (Boreotrophon) triangulatus Carpenter, Arnold, 38.
 Tropidocyclus Dall, Dall, 261.
 Tropidocyclus De Koninek, Clarke, 200.
 hyalinus n. sp., Clarke, 200.
 Tropidoleptus carinatus (Con.), Weller, 1291.
 carinatus Conrad, mut. pygmaeus nov., Loomis, 809.
 Tropidomya Dall and Smith, Dall, 261.
 Tryblidium patulum n. sp., Cleland, 208.
 Turbonilla Risso, Arnold, 38.
 (Pyrgolampros) adleri D. & B., n. sp., Arnold, 38.

Paleontology—Continued.

Genera and species described—Continued.

- Turbonilla* (*Pyrgolampros*) *arnoldi* D. & B., n. sp., Arnold, 38.
 (*Lancea*) *aurantia* Carpenter, Arnold, 38.
 (*Pyrgiscus*) *auricoma* D. & B., n. sp., Arnold, 38.
 (*Pyrgiscus*) *crebrifilata* Carpenter, Arnold, 38.
 (*Pyrgolampros*) *gibbosa* Carpenter, Arnold, 38.
 (*Pyrgisculus*) *laminata* Carpenter, Arnold, 38.
 (*Pyrgiscus*) *latifundia* D. & B., n. sp., Arnold, 38.
 (*Pyrgolampros*) *lowei* D. & B., n. sp., Arnold, 38.
 (*Pyrgolampros*) *lowei*, var. *pedroana* D. & B., n. sp., Arnold, 38.
 (*Strioturbonilla*) *muricata* Carpenter, Arnold, 38.
 (*Lancea*) *pentalopha* D. & B., n. sp., Arnold, 38.
 (*Strioturbonilla*) *similis* C. B. Adams, Arnold, 38.
 (*Strioturbonilla*) *stearnsii* D. & B., n. sp., Arnold, 38.
 (*Pyrgiscus*) *subeuspidata* Carpenter, Arnold, 38.
 (*Pyrgiscus*) *tenuicula* Gould, Arnold, 38.
 (*Strioturbonilla*) *torquata* Gould, Arnold, 38.
 (*Strioturbonilla*) *torquata*, var. *stylina* Carpenter, Arnold, 38.
 (*Lancea*) *tridentata* Carpenter, Arnold, 38.
Turritella Lamarck, Arnold, 38.
 budaensis n. sp., Shattuck, 1098.
 cooperi Carpenter, Arnold, 38.
 galisteensis n. sp., Johnson, 647.
 jewettii Carpenter, Arnold, 38.
Typha sp., Penhallow, 967.
Umbraculum (*Eosinica*) *elevatum* n. sp., Aldrich, 17.
Ucinulus mutabilis (Hall), Weller, 1291.
 nucleolatus (Hall), Weller, 1291.
 pyramidatus (Hall), Weller, 1291.
 vellicatus (Hall), Weller, 1291.
Unio *aeopiformis* n. sp., Whitfield, 1309.
 browni n. sp., Whitfield, 1309.
 douglassi n. sp., Stanton, 1166.
 farri n. sp., Stanton, 1166.
 nanaimoensis n. sp., Whiteaves, 1308.
 percorrugata n. sp., Whitfield, 1309.
 postbibrata n. sp., Whitfield, 1309.
 retusoides n. sp., Whitfield, 1309.
 verrucosiformis n. sp., Whitfield, 1309.
Urolophus halleri (?) Cooper, Arnold, 38.
Uronautes Cope, Williston, 1325.
Urotheca sp., Matthew, 858.
Vanikoro pulchella var., Whiteaves, 1308.
Veloritina Meek, Dall, 261.
Venerella Cossmann, Dall, 261.
Venericardia Lamarck, Arnold, 38.
Venericardia Lamarck, Dall, 261.
 section *Cardites* s. s., Dall, 261.
 section *Cyclocardia* Conrad, Dall, 261.
 (*Pteromeris*) *acaris* n. sp., Dall, 261.

Paleontology—Continued.

Genera and species described—Continued.

- Venericardia alticostata* Conrad, Dall, 261.
 barbarensis Stearns, Arnold, 38.
 bulla n. sp., Dall, 261.
 (*Cyclocardia*) *californica* n. sp., Dall, 261.
 carsonensis n. sp., Dall, 261.
 (*Cyclocardia*) *granulata* Say, Dall, 261.
 greggiana n. sp., Dall, 261.
 hadra n. sp., Dall, 261.
 himerta n. sp., Dall, 261.
 nasuta n. sp., Dall, 261.
 (*Pleuromeris*) *parva* Lea, Dall, 261.
 (*Pteromeris*) *perplana* Conrad, Dall, 261.
 planicosta Lamarck, Dall, 261.
 precisa n. sp., Dall, 261.
 scabricostata Guppy, Dall, 261.
 (*Pleuromeris*) *seitula* n. sp., Dall, 261.
 serricosta Heilprin, Dall, 261.
 simplex n. sp., Dall, 261.
 (*Pleuromeris*) *tellia* n. sp., Dall, 261.
 (*Pleuromeris*) *tridentata* Say, Dall, 261.
 ventricosa Gould, Arnold, 38.
 vicksburgensis n. sp., Casey, 178.
 vicksburgiana n. sp., Dall, 261.
 wilcoxensis n. sp., Dall, 261.
Venerupis Lamarck, Dall, 261.
Ventricola Roemer, Dall, 261.
Venus Linné, Arnold, 38.
Venus (Linné) Lamarck, Dall, 261.
 campechiensis Gmelin, Dall, 261.
 ducateli Conrad, Dall, 261.
 (*Chione*) *fluctifraga* Sowerby, Arnold, 38.
 (*Chione*) *gnidia* Broderip and Sowerby, Arnold, 38.
 halidona Dall, Dall, 261.
 langdoni Dall, Dall, 261.
 mercenaria var. *notata* Say, Dall, 261.
 (*Chione*) *neglecta* Sowerby, Arnold, 38.
 perlamina Conrad, Arnold, 38.
 plena Conrad, Dall, 261.
 (*Chione*) *simillima* Sowerby, Arnold, 38.
 (*Chione*) *succincta* Valenciennes, Arnold, 38.
 tridacnoides Lamarck, Dall, 261.
Vernipora scrupuloides Hall, Weller, 1291.
Verticordia S. Wood, Arnold, 38.
 (*Trigonulina*) *bowdenensis* n. sp., Dall, 261.
 (*Trigonulina*) *cossmanni* n. sp., Dall, 261.
 dalliana n. sp., Aldrich, 16.
 (*Trigonulina*) *emmonsii* Conrad, Dall, 261.
 eocenensis Langdon (em.), Dall, 261.
 (*Haliris*) *jamaicensis* n. sp., Dall, 261.
 (*Haliris*) *mississippiensis* Dall, Dall, 261.
 novemcostata Adams and Reeve, Arnold, 38.
 quadrangularis n. sp., Aldrich, 16.
 soetsensis n. sp., Aldrich, 16.
 sp. indet., Dall, 261.
 (*Trigonulina*) sp. indet., Dall, 261.
Viburnum hollickii n. sp., Berry, 75.
 ovatum n. sp., Penhallow, 967.
Villorita cyprinoides (Wood), Dall, 261.
 floridana Dall, Dall, 261.
Vitrinella C. B. Adams, Arnold, 38.
 williamsoni Dall, Arnold, 38.

Paleontology—Continued.

Genera and species described—Continued.

- Viviparus montanaensis* n. sp., Stanton, 1166.
Volupia Defrance, Dall, 261.
Volvarina Hinds, Arnold, 38.
Volvula A. Adams, Arnold, 38.
 cylindrica Carpenter, Arnold, 38.
Vulcanomya Dall, Dall, 261.
Waagenoeras Gemmellaro, Smith, 1137.
 cumminsi White, Smith, 1137.
 hilli n. sp., Smith, 1137.
Westonia Walcott, Matthew, 858.
 escasoni, Matthew, 858.
Whitella suborbicularis n. sp., Weller, 1291.
 subtruncata (Hall), Weller, 1291.
Whitfieldella nitida Hall, Clarke and Ruedemann, 204.
 cf. *nitida* Hall, Grabau, 465.
 nucleolata (Hall), Weller, 1291.
Wilsonia globosa n. sp., Decker, 1291.
Worthenia? lasallensis Worthen?, Girty, 455.
 ?marcouiana Geinitz?, Girty, 455.
 tabulata Conrad?, Girty, 455.
 ?sp., Girty, 455.
Xiphactinus Leidy, Stewart, 1186.
 audax (Cope), Stewart, 1186.
 brachygnathus Stewart, Stewart, 1186.
 lowii Stewart, Stewart, 1186.
Yoldia Möller, Arnold, 38.
 cooperi Gabb, Arnold, 38.
 diminutiva n. sp., Whiteaves, 1308.
 glabra Beede and Rogers, Beede, 64.
 knoxensis (McChesney)?, Beede, 64.
 scissurata Dall, Arnold, 38.
 subscitula (Meek and Hayden), Beede, 64.
Zaphrentis gibsoni White, Girty, 455.
 prolixus n. sp., Greene, 485.
 cf. *racinensis* Whitfield, Clarke and Ruedemann, 204.
 roemeri E. & H.?, Weller, 1291.
 tantilla Miller, Girty, 455.
 trisinuatus n. sp., Greene, 482.
 weberi n. sp., Greene, 481.
 sp., Girty, 455.
 sp. undet., Weller, 1291.
Zatrachys crueifer n. sp., Case, 175.
Zeacrinus commaticus Miller, Grabau, 464.
 ?robustus Beede, Beede, 64.
Zirphaea Leach, Arnold, 38.
 gabbii Tryon, Arnold, 38.
Zygospira nicolleti (W. & S.), Weller, 1291.
 recurvirostra (Hall), Weller, 1291.

Panama.

- Manganese industry of Panama, Williams, 1319.

Pennsylvania.

- Basal conglomerate in Lehigh and Northampton counties, Peck, 964.
Brownsville-Connellsville folio, Campbell, 164.
Charbons gras de la Pennsylvanie et de la Virginie occidentale, Heurteau, 559.
Clays of the United States, Ries, 1024.
Coal measures of bituminous regions, Adams, 11.
Current notes on physiography, Davis, 278.
Elkland-Tioga folio, Fuller and Alden, 424.

Pennsylvania—Continued.

- Gaines folio*, Fuller and Alden, 423.
Geographic development of northern Pennsylvania and southern New York, Campbell, 165.
Geological excursion in Pittsburg region, Grant, 476.
Lower Carboniferous of Appalachian basin, Stevenson, 1182.
Northward flow of ancient Beaver River, Hice, 564.
Ordovician section near Bellefonte, Collic, 228.
Origin of anticlinal folds near Meadville, Smallwood and Hopkins, 1122.
Original southern limit of Pennsylvania anthracite beds, Lyman, 821.
Pocono rocks in the Allegheny Valley, Campbell, 170.
Recent work in bituminous coal field of Pennsylvania, Campbell, 167.
Road-making materials of Pennsylvania, Ihlseng, 628.
Shifting of faunas, Williams, 1320.
Slate industry at Slatington, Dale, 260.
Steinkohlenggebiete von Pennsylvanien und Westvirginien, Simmersbach, 1112.
Soil survey around Lancaster, Dorsey, 311.
Soil survey of the Lebanon area, Smith and Bennett, 1142.
Structure of South Mountain, Stose, 1191.

Petrology.

Arizona.

- Geology of Fort Apache region, Reagan, 1005.
Geology of Globe copper district, Ransome, 991.

California.

- Clastic dikes, Newsom, 930.
Klamath Mountain section, Diller, 302.
Plumasite, Lawson, 775.

Canada.

- Boundary Creek district, Brock, 131.
Geology of St. Helen's Island, Nolan and Dixon, 934.
Laurentian limestones and granite of Haliburton County, Graton, 477.
Monteregian Hills, Adams, 3.
Nepheline syenite in western Ontario, Miller, 905.
Notes on specimens collected in the Canadian Rocky Mountains, Bonney, 99.
Petrography of Kettle River mining division, Silver, 1111.
Round Lake to Abitibi River, Bolton, 98.
Sudbury mining district, Barlow, 58.
Up and down the Mississaga, Graton, 478.

Colorado.

- Andesite of Mount Sugar Loaf, Hogarty, 590.
Basaltic zones as guides to ore deposition, Stevens, 1181.
Granite of West Sugar Loaf Mountain, Henry, 551.
Mica andesite of west Sugarloaf Mountain, Blake, 81.
Nodular-bearing schists near Pearl, Read, 1001.
Olivinite dike of Magnolia district, Whitaker, 1294.

Petrology—Continued.*Colorado—Continued.*

Sunset trachyte, Breed, 122.

Tellurium veins in La Plata Mountains, Austin, 42.

Georgia.

Sandstone dikes near Columbus, McCallie, 827.

Guatemala.

Asche des Vulkans Sta. Maria, Brauns, 120, 121.

Produkte des Ausbruchs am S. Maria, Bergeat, 73.

Produkte Vulkan S. Maria, Bergeat, 72.

Idaho.

Geology of Idaho and Oregon, Russell, 1048.

Massachusetts.

Geology of Worcester, Massachusetts, Perry and Emerson, 971.

Mexico.

Geology of nepheline syenite area at San José, Tamaulipas, Finlay, 396.

Geology of San Pedro district, Finlay, 394.

In San Cristobal gefallene Asche, Schottler, 1083.

Vulkanische Asche, Schmidt, 1076.

Xinantacatl ou volcan Nevado de Toluca, Ordoñez, 941.

Minnesota.

Dalles of the St. Croix, Berkey, 74.

Mesabi iron-bearing district of Minnesota, Leith, 786.

Origin and development of iron ores of Mesabi and Gogebic iron ranges, Leith, 790.

Vermilion iron-bearing district of Minnesota, Clements, 209.

Newfoundland.

Variolitic pillow lava, Daly, 267.

New Hampshire.

Geology of Mount Kearsarge, Perry, 970.

New Mexico.

Geology of Cerillos Hills, Johnson, 648.

New York.

Genesis of amphibole schists and serpentines of Manhattan Island, Julien, 656.

Geology of the serpentines of central New York, Schneider, 1081.

Northumberland volcanic plug, Woodworth, 1352.

Petrography and age of the Northumberland rock, Cushing, 259.

Rossie lead veins, Smyth, 1147.

North Carolina.

Copper-bearing rocks of Virgilina copper district, Watson, 1270.

Oregon.

Port Orford folio, Diller, 301.

Pennsylvania.

Road-making materials of Pennsylvania, Ihlseng, 628.

South Dakota.

Newly discovered rock at Sioux Falls, Todd, 1207.

Tennessee.

Erratic boulder from the Coal Measures of Tennessee, McCallie, 826.

Utah.

Geology of Bingham Cañon, Kemp, 673.

Petrology—Continued.*Vermont.*

Geology of Ascutney Mountain, Daly, 265.

Virginia.

Copper-bearing rocks of Virgilina copper district, Watson, 1270.

Washington.

Building and ornamental stones of Washington, Shedd, 1100.

Geology of Mount Rainier, Smith, 1130.

Pseudoserpentine from Stevens County, Clarke, 193.

West Indies.

Composition chimique des poussières volcaniques de la Martinique, Gillot, 451.

Cordiérite dans les produits éruptifs de la Montagne Pelée, Lacroix, 724.

Dust from Soufrière, Bonney, 101.

Enclaves basiques des volcans de la Martinique, Lacroix, 725.

Enclaves des andésites de Montagne Pelée, Lacroix, 713.

History of the Caribbean Islands, Frazer, 418.

Observations minéralogiques faites sur les produits de l'incendie de Saint-Pierre, Lacroix, 717.

Recent tufts of the Soufrière, Howe, 618.

Wisconsin.

Dalles of the St. Croix, Berkey, 74.

Wyoming.

Leucite hills of Wyoming, Kemp and Knight, 677.

General.

Calculation of center points in the quantitative classification of igneous rocks, Washington, 1267.

Chemical analyses of igneous rocks, Washington, 1266.

Chemical composition of igneous rocks expressed by diagrams, Iddings, 626.

Determination of feldspars in thin section, Spurr, 1156.

Fall excursions of the Geological Department, Columbia University, Shimer, 1108.

Genesis of certain cherts, Keyes, 686.

Grain of igneous intrusives, Lane, 758.

Granite, Winehell, 1346.

Igneous rocks: how to identify them, O'Brien, 935.

Mechanics of igneous intrusion, Daly, 266.

Metamorphism of the Laurentian limestones of Canada, Winehell, 1345.

Mineral analyses, Clarke, 192.

Paleozoic coral reefs, Grabau, 466.

Plumose diabase containing sideromelan and spherulites of calcite and blue quartz, Emerson, 370.

Porphyritic appearance of rocks, Lane, 759.

Practical working of the quantitative classification, Mathews, 851.

Preparing sections of rocks, Mackenzie, 834.

Quantitative classification of igneous rocks, Cross, and others, 251.

Quantitative classification of igneous rocks, Merrill, 890.

Quantitative classification of rocks, Mathews, 850.

Petrology—Continued.*General—Continued.*

Quantitative distribution of rock magmas, Washington, 1268.

Regeneration of elastic feldspar, Winchell, 1343.

Rock name anorthosite, Kolderup, 703.

Significance of occurrence of minute quantities of metalliferous minerals in rocks, Keyes, 685.

Spheroidal granite, Kemp, 667.

Rocks described.

Actinolite, Julien, 656.

Adamellite, Ransome, 991.

Amphibole schist, Julien, 656.

Amphibolite, Graton, 477.

Andesine rock, Kolderup, 703.

Andesite, Hogarty, 590.

Andote, Johnson, 648.

Anorthosite, Kolderup, 703.

Ash, volcanic, Bergeat, 72, 73.

Ash, volcanic, Brauns, 120, 121.

Ash, volcanic, Schmidt, 1076.

Ash, volcanic, Schottler, 1083.

Augite andesite, Johnson, 648.

Augite monzonite-porphry, Johnson, 648.

Basalt, Diller, 301.

Basalt, Ransome, 991.

Biotite, Julien, 656.

Biotite-granite, Daly, 265.

Breccia, Barlow, 58.

Breccia, Johnson, 648.

Bytownite rock, Kolderup, 703.

Calcarenite, Grabau, 466.

Calcilutite, Grabau, 466.

Calcirudite, Grabau, 466.

Camptonite, Daly, 265.

Chert, Leith, 786.

Diabase, Daly, 265.

Diabase, Lane, 758.

Diabase, Ransome, 991.

Dacite, Ransome, 991.

Dacite-porphry, Diller, 301.

Diorite, Daly, 265.

Diorite-porphry, Ransome, 991.

Diorite schist, Julien, 656.

Essexite, Adams, 3.

Essexite, Daly, 265.

Gabbro, Diller, 301.

Gabbro, Todd, 1206.

Gabbro-porphry, Johnson, 648.

Glaucinite, Leith, 786.

Gneiss, Barlow, 58.

Gneiss, Daly, 265.

Gneiss, Graton, 477.

Granite, Barlow, 58.

Granite, Brock, 131.

Granite, Graton, 477.

Granite, Henry, 551.

Granite, Kemp, 667.

Granite, Perry, 970.

Granite-porphry, Ransome, 991.

Granitite, Ransome, 991.

Granodiorite, Brock, 131.

Granodiorite, Ransome, 991.

Greenalite rock, Leith, 786.

Greenstone, Barlow, 58.

Petrology—Continued.*Rocks described—Continued.*

Grossularite, Daly, 265.

Hornblende andesite, Johnson, 648.

Hornblende-augite andesite, Johnson, 648.

Hornblende-augite trachy-andesite, Johnson, 648.

Hornblende schist, Julien, 656.

Hornfels, Daly, 265.

Labradorite rock, Kolderup, 703.

Limburgite, Johnson, 648.

Limburgite, Stevens, 1181.

Mica-andesite, Blake, 81.

Mica-andesite, Johnson, 648.

Monzonite, Ransome, 991.

Monzonite, Merrill, 890.

Nepheline-basalt, Stevens, 1181.

Nepheline syenite, Miller, 905.

Nordmarkite, Daly, 265.

Nordmarkite-porphry, Daly, 265.

Oligoclase rock, Kolderup, 703.

Olivine basalt, Johnson, 648.

Olivine diabase, Barlow, 58.

Olivinite, Whitaker, 1294.

Ophite, Lane, 758.

Phyllite, Daly, 265.

Pierotitanite, Whitaker, 1294.

Pillow-lava, Daly, 267.

Plumasite, Lawson, 775.

Pulaskite, Adams, 3.

Pulaskite, Brock, 131.

Pyroxenite, Graton, 477.

Quartz-mica-diorite, Ransome, 991.

Quartz-monzonite, Ransome, 991.

Quartz-porphry, Perry, 970.

Quartz-sericite-schist, Daly, 265.

Quartzite, Barlow, 58.

Seapolite amphibolite, Graton, 477.

Serpentine, Clarke, 193.

Serpentine, Diller, 301.

Serpentine, Julien, 656.

Syenite, Daly, 265.

Trachyte, Breed, 122.

Trap, Lane, 758.

Tephrite, Stevens, 1181.

Tuff, Barlow, 58.

Turquoise, Johnson, 648.

Variolite, Daly, 267.

Volcanic dust, Bomey, 101.

Windsorite, Daly, 265.

Philippine Islands.

Geological reconnaissance of Bulacan, Me-
Caskey, 829.

Physiographic geology.*Alaska.*

Wrangell Mountains, Mendenhall, 877.

Appalachian region.

Anticlinal folds near Meadville, Pre, Small-
wood and Hopkins, 1122.

Brownsville-Gunnelsville folio, Campbell,
164.

Current notes on physiography, Davis, 278,
280.

Drainage modifications in Ohio, West Vir-
ginia, and Kentucky, Tight, 1203.

Elkland-Tioga folio, Fuller and Alden, 424.

Gaines folio, Fuller and Alden, 423.

Physiographic geology—Continued.*Appalachian region—Continued.*

- Geographic distribution of northern Pennsylvania and southern New York, Campbell, 115.
- Geological excursion in Pittsburg region, Grant, 476.
- Hydrography of the southern Appalachians, Pressey and Myers, 977.
- Northward flow of ancient Beaver River, Hice, 564.
- Original southern limit of anthracite beds, Lyman, 821.
- Physiographic features of Maryland, Abbe, 1.
- Stream contest along the Blue Ridge, Davis, 285.

Atlantic coast region.

- Glacial conditions on Long Island, Buffet, 137.
- Origin of sandhill topography of the Carolinas, Cobb, 212.
- Physiographic features of Maryland, Abbe, 1.
- Recent changes in North Carolina coast, Cobb, 213.
- Submarine valleys off the American coast, Spencer, 1154.

Canada.

- Laurentian peneplain, Wilson, 1332.
- Physical geography of northern Appalachian system, Dresser, 324.
- Physiography of New Brunswick, Ganong, 430.
- Shore features of Lake Huron, Jefferson, 635.
- Up and down the Mississauga, Gratton, 478.

Great Basin region.

- Basin-range structure in the Death Valley region, Campbell, 169.
- Block mountains of Basin Range province, Davis, 289.
- Geology of Nevada, Spurr, 1155.
- Hurricane fault in southwestern Utah, Huntington and Goldthwait, 623.
- Mountain ranges of Great Basin, Davis, 283.
- Origin of Basin ranges, Gilbert, 448.
- Physiography of southern Arizona and New Mexico, Fairbanks, 383.
- Plateau province of Utah and Arizona, Davis, 282.
- Structural section of a Basin range, Louderbach, 811.

Great Lakes region.

- Physiography of Wisconsin, Collie, 227.
- Vermilion iron-bearing district of Minnesota, Clements, 209.

Great Plains region.

- An old Platte channel, Condra, 240.
- Canyons of northeastern New Mexico, Lee, 784.
- Concretions and their geological effects, Todd, 1205.
- Current notes on physiography, Davis, 277.
- Physiographic divisions of Kansas, Adams, 4.
- Report of State geologist of Nebraska, Barbour, 56.

Hawaiian Islands.

- Geology of Hawaiian Islands, Branner, 119.

Physiographic geology—Continued.*Mississippi Valley region.*

- Dalles of the St. Croix, Berkeley, 74.
- Geography and geology of Minnesota, Hall, 494.
- Geology of Howard County, Iowa, Calvin, 158.
- Physiography of Iowa, Calvin, 161.
- Physiography of Wisconsin, Collie, 227.
- Pre-Potsdam peneplain of pre-Cambrian of north central Wisconsin, Weidman, 1289.

New England and New York.

- Delta plain at Andover, Massachusetts, Mills, 910.
- Delta plains of Nashua Valley, Crosby, 249.
- Elevated beaches of Cape Ann, Woodworth, 1353.
- Changes of level at Cape Ann, Tarr, 1195.
- Glacial cirques and rock-terraces on Mount Toby, Massachusetts, Emerson, 369.
- Glacial conditions on Long Island, Buffet, 137.
- Physiographic belts in western New York, Gilbert, 447.
- Physiography of Lake George, Kemp, 671.
- Pre-Iroquois channels between Syracuse and Rome, 385.
- Protection of terraces in upper Connecticut River, Hitchcock, 579.
- River terraces and reversed drainage, Mills, 909.
- Type case in diversion of drainage, Carney, 172.

Ohio Valley region.

- Drainage modifications in Ohio, West Virginia, and Kentucky, Tight, 1203.
- Lower Carboniferous area of southern Indiana, Ashley, 40.
- Section across southern Indiana, Newsom, 929.
- Topographic features of lower Tippecanoe Valley, Breeze, 123.

Pacific coast region.

- Abandoned stream gaps in northern Washington, Smith, 1136.
- Ellensburg folio, Smith, 1131.
- Geology and physiography of central Washington, Smith, 1132.
- Great lava-flood, Redway, 1007.
- Hanging valleys of the Yosemite, Branner, 118.
- Mount Lassen and cinder cone region, Miller, 902.
- Origin of transverse mountain valleys, Le Conte, 782.
- Pacific mountain system, Spencer, 1148.
- Physiography and geology of the Siskiyou Range, Anderson, 29.
- Physiography of California, Fairbanks, 382.
- Physiography and deformation of the Wenatchee-Chelan district, Willis, 1322.
- Post-Tertiary deformation of the Cascade Range, Willis, 1324.
- Prehistoric California, Yates, 1365.
- River terraces of Klamath region, Hershey, 557.
- Sierran valleys of Klamath region, Hershey, 555.

Physiographic geology—Continued.*Rocky Mountain region.*

Current notes on physiography, Davis, 279, 281.

Ephemeral lakes in arid regions, Keyes, 681.
Geological structure of New Mexican bolson plains, Keyes, 680.

Hanging valleys of Georgetown, Colorado, Crosby, 247.

Physiography of Flathead Lake region, Elrod, 368.

Southwestern region.

Ephemeral lakes in arid regions, Keyes, 681.

Geological structure of New Mexican bolson plains, Keyes, 680.

Geology of the Cerrillos Hills, Johnson, 646.

Physical geography, geology, and resources of Texas, Dumble, 329.

Saddle-back topography of the Boone chert region, Purdue, 984.

Tishomingo folio, Taff, 1192.

West Indies.

Geologic and physiographic history of the Lesser Antilles, Hill, 572.

Geological relationship of volcanoes of West Indies, Spencer, 1152.

General.

Current notes on physiography. Davis, 276, 277, 280.

Influence of underlying rocks on vegetation, Cowles, 242.

Frontier of physiography, Hobbs, 583.

Physical geography, Tarr, 1194.

Relation of faults to topography, Spurr, 1165.

Relief of the earth's surface, Curtis, 257.

Porto Rico.

Soil survey from Arecibo to Ponce, Dorsey, Mesmer, and Caine, 315.

Quaternary.*Appalachian region.*

Brownsville-Connellsville folio, Campbell, 164.

Atlantic coast region.

Geology of Long Island, Veatch, 1248.

Results of resurvey of Long Island, Fuller and Veatch, 427.

Surface formations in southern New Jersey, Salisbury, 1053.

Canada.

Artesian borings, surface deposits, and ancient beaches, Chalmers, 180.

Geology of Nevada, Spurr, 1155.

Great Basin region.

Geology of Globe copper district, Ransome, 991.

Great Lakes region.

Forest beds of the lower Fox, Lawson, 774.

Great Plains region.

Camp Clarke folio, Darton, 271.

Hartville folio, Smith, 1138.

Olivet folio, Todd, 1208.

Scotts Bluff folio, Darton, 272.

Gulf region.

Oil fields of Texas-Louisiana Gulf coastal plain, Hayes and Kennedy, 532.

Quaternary—Continued.*Mississippi Valley region.*

Discovery of the Lansing skeleton, Concanon, 237.

Geology of Minnesota, Hall, 495.

Geology of Monroe County, Iowa, Beyer and Young, 78.

New England and New York.

Changes of level at Cape Ann, Tarr, 1195.

Geology of Long Island, Veatch, 1248.

Results of resurvey of Long Island, Fuller and Veatch, 427.

Ohio Valley region.

Fossil land shells of old forest bed of Ohio River, Billups, 79.

Lower Carboniferous area of southern Indiana, Ashley, 46.

Nomenclature of Ohio geological formations, Prosser, 982.

Pacific coast region.

Ellensburg folio, Smith, 1131.

Marine Pliocene and Pleistocene of San Pedro, Arnold, 38.

Port Orford folio, Diller, 301.

River terraces of Klamath region, Hershey, 557.

Klamath Mountain section, Diller, 302.

Rocky Mountain region.

Silver City folio, Lindgren and Drake, 806.

Southwestern region.

Age of lavas of plateau region, Reagan, 1004.

Geology of Fort Apache region, Reagan, 1005.

Geology of southwestern Texas, Dumble, 332.

Geology of the Jemez-Albuquerque region, Reagan, 1003.

Tishomingo folio, Taff, 1192.

General.

Experiences with early man in America, Sternberg, 1175.

How long ago was America peopled, Matthew, 862.

Loess and the Lansing man, Shimek, 1105.

Organic remains in post-Glacial deposits, Olsson-Seffer, 940.

Rhode Island.

Clays of the United States, Ries, 1024.

Salvador.

Vulkan Izalco, Sapper, 1057.

Silurian.*Appalachian region.*

Devonic and Ontaric formations of Maryland, Schuchert, 1092.

Manlius formation of New York, Schuchert, 1089.

Paleozoic faunas, Weller, 1291.

Canada.

Formation of sedimentary deposits, Wilson, 1334.

Fossiliferous rocks of southwest Ontario, Parks, 958.

Geological exploration in district of White Bay, Howley, 620.

Great Basin region.

Geology of Nevada, Spurr, 1155.

Paleozoic rocks of Great Basin region, Weeks, 1288.

Silurian—Continued.*Great Lakes region.*

Paleozoic coral reefs, Grabau, 466.

Mississippi Valley region.

Geology of Minnesota, Hall, 495.

Geology of Missouri, Gallaher, 429.

Lead and zinc deposits of southwestern Wisconsin, Grant, 475.

New England and New York.

Cobleskill limestone of New York, Hartnagel, 505.

Eurypterid fauna from the Salina, Sarle, 1070.

Geology of eastern New York, Prosser, 983.

Geology of Onondaga County, N. Y., Schneider, 1077.

Guelph fauna of New York, Clarke and Ruedemann, 204.

Manlius formation of New York, Schuchert, 1089.

Rocks of Rondout, Van Ingen and Clark, 1240.

Stratigraphy of Beeraft Mountain, Grabau, 465.

Ohio Valley region.

Bearing of Clinton and Osgood formations on age of Cincinnati anticline, Foerste, 411.

Columbia folio, Hayes and Ulrich, 533.

Devonian era in Ohio basin, Claypole, 206.

Nomenclature of Ohio geological formations, Prosser, 982.

Niagara domes of northern Indiana, Kindle, 689.

Ohio natural gas fields, Bownocker, 117.

Petroleum and natural gas in Ohio, Bownocker, 117a.

Section across southern Indiana, Newsom, 929.

Silurian and Devonian limestones of western Tennessee, Foerste, 408.

Use of terms Linden and Clifton limestones in Tennessee geology, Foerste, 410.

Southwestern region.

Geology of Fort Apache region, Reagan, 1005.

Tishomingo folio, Taff, 1192.

South Carolina.

Clays of the United States, Ries, 1024.

Soil survey of the Abbeville area, Taylor and Rice, 1198.

Soil survey of the Darlington area, Rice and Taylor, 1012.

South Dakota.

Age of Homestake lode, Hewett, 562.

Building stones of South Dakota, Todd, 1206.

Alexandria folio, Todd and Hall, 1211.

Gold production of North America, Lindgren, 802.

Locality furnishing Cretaceous fishes, Hay, 520.

Newly discovered rock at Sioux Falls, Todd, 1207.

Mitchell folio, Todd, 1210.

Olivet folio, Todd, 1208.

Ore deposits of northern Black Hills, Irving, 630.

Parker folio, Todd, 1209.

Potsdam formation of Bald Mountain district, Blatchford, 89.

South Dakota—Continued.

Red Beds of Black Hills, Richardson, 1015.

Triassic and Jurassic strata of the Black Hills, Hovey, 616.

Tennessee.

Cincinnati group in western Tennessee, Foerste, 407.

Clays of the United States, Ries, 1024.

Columbia folio, Hayes and Ulrich, 533.

Copper deposits of Appalachian States, Weed, 1278.

Cranberry folio, Keith, 659.

Erratic boulder from Coal Measures, McCallie, 826.

Iron ore deposits of the Cranberry district, Keith, 660.

Lower Carboniferous of Appalachian basin, Stevenson, 1182.

Mount Pleasant phosphate field, Ruhm, 1047.

Silurian and Devonian limestones of western Tennessee, Foerste, 408.

Soil survey of Montgomery County, Lapham and Miller, 769.

Stoneware and brick clays, Eckel, 350.

Tennessee marbles, Keith, 661.

Tennessee white phosphates, Hayes, 528.

Use of terms Linden and Clifton limestones in Tennessee geology, Foerste, 410.

White phosphates of Decatur County, Eckel, 352.

Tertiary.*Atlantic coast region.*

Cretaceous-Eocene boundary in the Atlantic coastal plain, Clark, 190.

Surface formations in southern New Jersey, Salisbury, 1053.

Tertiary fauna of Florida, Dall, 261.

Canada.

Boundary Creek district, Brock, 131.

Great Basin region.

Geology of Globe copper district, Ransome, 991.

Geology of Nevada, Spurr, 1155.

Great Plains region.

Camp Clarke folio, Nebraska, Darton, 271.

Hartville, folio, Smith, 1138.

Origin of North Dakota lignites, Wilder, 1317.

Report of State geologist of Nebraska, Barbour, 56.

Scotts Bluff folio, Darton, 272.

Tertiary formations of the northern Great Plains, Darton, 273.

Greenland.

Tertiary fauna at Kap Dalton, Ravn, 996.

Gulf region.

Eocene outcrops in central Georgia, Harris, 504.

Grand Gulf formation, Dall, 262.

Grand Gulf formation, Hilgard, 565.

Grand Gulf formation, Smith and Aldrich, 1127.

Oil fields of Texas-Louisiana Gulf coastal plain, Hayes and Kennedy, 532.

Portland cement materials of Alabama, Smith, 1126.

Tertiary fauna of Florida, Dall, 261.

Tertiary—Continued.*Pacific coast region.*

Coal deposits of Washington, Landes and Ruddy, 753.

Correlation of John Day and Mascall, Merriam and Sinclair, 886.

Ellensburg folio, Smith, 1131.

Geology and physiography of central Washington, Smith, 1132.

Great lava-flood, Redway, 1007.

Klamath Mountain section, Diller, 302.

Marine Pliocene and Pleistocene of San Pedro, Arnold, 38.

Port Orford folio, Diller, 301.

Prehistoric California, Yates, 1365.

Rocky Mountain region.

Fresh-water Tertiaries at Green River, Wyoming, Davis, 288.

Geology of Idaho and Oregon, Russell, 1048.

Silver City folio, Lindgren and Drake, 806.

Southwestern region.

Age of lavas of plateau region, Reagan, 1004.

Beaumont oil-field, Hill, 568.

Fresh-water Tertiary of Texas, Gidley, 440.

Geology of Fort Apache region, Reagan, 1005.

Geology of southwestern Texas, Dumble, 332.

Geology of the Antelope Hills, Sherwin, 1103.

Geology of the Cerrillos Hills, Johnson, 646.

Geology of the Jemez-Albuquerque region, Reagan, 1003.

West Indies.

Age des formations volcaniques de la Martinique, Giraud, 453.

Was man in America in the Glacial period, Winchell, 1344.

General.

Recent zoopaleontology, Osborn, 949.

Texas.

Beaumont oil-field, Hill, 568.

Composition and occurrence of petroleum, Mabery, 823.

Corals of Buda limestone, Vaughan, 1244.

Foraminiferal ooze, Udden, 1221.

Fresh-water Tertiary of Texas, Gidley, 440.

Geology of Beaumont oil field, Dumble, 330.

Geology of southwestern Texas, Dumble, 332.

Glyptodont from Texas Pleistocene, Osborn, 946.

Industrie du pétrole en Californie, Heurteau, 560.

Iron ores of east Texas, Dumble, 331.

Mercury minerals from Terlingua, Tex., Moses, 919.

Minerals and mineral localities of Texas, Simonds, 1113.

Mollusca of Buda limestone, Shattuck, 1098.

Oil fields of Texas-Louisiana Gulf coastal plain, Hayes, 526.

Oil fields of Texas-Louisiana Gulf coastal plain, Hayes and Kennedy, 532.

Permian life of Texas, Sternberg, 1176.

Physical geography, geology, and resources of Texas, Dumble, 329.

Platygonus from Texas Pliocene, Gidley, 439.

Soil survey of the Brazoria area, Bennett and Jones, 69.

Soil survey of the Vernon area, Lapham, 767.

Texas—Continued.

Soil survey of the Willis area, Martin, 847.

Stratigraphic relations of Red Beds, Adams, 6.

Texas mercury minerals, Hill, 567.

Tin deposits at El Paso, Weed, 1276.

Vertebrates from Permian, Case, 175.

Trias.*Canada.*

Geology of Vancouver Island, Haycock, 521.

Geology of Vancouver Island, Webster, 1273.

Great Basin region.

Geology of Nevada, Spurr, 1155.

Hurricane fault in southwestern Utah, Huntington and Goldthwait, 623.

Great Plains region.

Hartville folio, Smith, 1138.

Red Beds of Black Hills, Richardson, 1015.

Triassic and Jurassic strata of the Black Hills, Hovey, 616.

Pacific coast region.

Klamath Mountain section, Diller, 302.

Marine sediments of eastern Oregon, Washburne, 1265.

Southwestern region.

Geology of the Jemez-Albuquerque region, Reagan, 1003.

Utah.

Coal mining at Sunnyside, Harrington, 503.

Copper deposits of Beaver River Range, Crowther, 252.

Eruption of rhyolite, Gilbert, 446.

Geology of Bingham Canyon, Kemp, 672.

Gold production of North America, Lindgren, 802.

Hurricane fault in southwestern Utah, Huntington and Goldthwait, 623.

Joint veins, Gilbert, 445.

Little Cottonwood granite body of Wasatch Mountains, Emmons, 372.

Mineral crest, Emmons, 376.

Mineral crest, Jenney, 636.

Mineral crest, Smith, 1135.

Mountain ranges of Great Basin, Davis, 283.

Ore deposits of Bingham, Boutwell, 116.

Park City mining district, Boutwell, 115.

Plateau province of Utah and Arizona, Davis, 282.

Reconnaissance in Sanpete, Cache and Utah counties, Means, 869.

Soil survey in Salt Lake Valley, Gardner and Stewart, 432.

Soil survey in the Sevier Valley, Gardner and Jensen, 434.

Soil survey in Weber County, Gardner and Jensen, 433.

Southwestern Utah and its iron ores, Hewett, 561.

Vermont.

Asbestos region in northern Vermont, Kemp, 670.

Field work at Larrabees Point, Shimer, 1109.

Geology of Ascutney Mountain, Daly, 265.

Virginia.

Clays of the United States, Ries, 1024.

Copper-bearing rocks of Virgilina copper district, Watson, 1270.

Virginia—Continued.

- Copper deposits of Appalachian States, Weed, 1278.
- Correlation of the Potomac formation, Ward, 1261.
- Lower Carboniferous of Appalachian basin, Stevenson, 1182.
- Meteorite iron from Augusta County, Campbell and Howe, 163.
- Origin of Oriskany limonites, Johnson, 651.
- Salt and gypsum deposits of southwestern Virginia, Eckel, 351.
- Soil survey of the Albemarle area, Mooney and Bonsteel, 917.
- Soil survey of the Bedford area, Mooney, Martin, and Caine, 915.
- Soil survey of the Prince Edward area, Mooney and Caine, 916.

Washington.

- Abandoned stream gaps in northern Washington, Smith, 1136.
- Anticlinal mountain ridges in central Washington, Smith, 1134.
- Building and ornamental stones of Washington, Shedd, 1100.
- Coal deposits of Washington, Landes and Ruddy, 753.
- Coal fields of Cook Inlet, Alaska, and Pacific coast, Kirsopp, 693.
- Ellensburg folio, Smith, 1131.
- Geology and physiography of central Washington, Smith, 1132.
- Geology of Mount Rainier, Smith, 1130.
- Gold mining in central Washington, Smith, 1133.
- Gold production of North America, Lindgren, 802.
- Mammals in the swamps of Whitman County, Sternberg, 1177.
- Mounts Hood and Adams and their glaciers, Reid, 1011.
- Physiography and deformation of the Wenatchee-Chelan district, Willis, 1322.
- Pseudo-serpentine from Stevens County, Clarke, 193.
- Soil survey of the Walla Walla area, Holmes, 597.
- Soils of the wheat lands of Washington, Calkins, 156.
- Soil survey of the Yakima area, Jensen and Olshausen, 640.

West Indies.

- Activity of Mont Pelée, Heilprin, 545.
- Age des formations volcaniques de la Martinique, Giraud, 453.
- Analysis of dust from La Soufrière, Bridgford, 129.
- Composition chimique des poussières volcaniques de la Martinique, Gillot, 451.
- Composition des gaz des fumerolles du Mont Pelée, Gautier, 437.
- Copper mines of Cobre, Santiago de Cuba, Moffet, 912.
- Cordiérite dans les produits éruptifs de la Montagne Pelée, Lacroix, 724.
- Dominica, Sapper, 1062.
- Dust from Soufrière, Bonney, 101.

West Indies—Continued.

- Enclaves basiques des volcans de la Martinique, Lacroix, 725.
- Enclaves des andésites de Montagne Pelée, Lacroix, 713.
- Erosion phenomena on Mont Pelée and Soufrière, Hovey, 615.
- Éruption de la Martinique, Lacroix and others, 712.
- Éruption de la Montagne Pelée, Lacroix, 720.
- Éruption du volcan de Saint-Vincent, Lacroix, 722.
- Éruption volcanique à la Martinique, Thierry, 1202.
- Éruptions de Saint-Vincent, Lacroix, 726.
- Éruptions des nuages de la Montagne Pelée, Lacroix, 719.
- Eruptions of Soufrière, Anderson and Flett, 33.
- Éruptions volcaniques de la Martinique, Lacroix, 718.
- État actuel de la Soufrière de la Guadeloupe, Lacroix, 721.
- État actuel du volcan de la Montagne Pelée, Lacroix, 716.
- Gaz des fumerolles du Mont Pelée, Moissan, 913.
- Geologic and physiographie history of the Lesser Antilles, Hill, 572.
- Geological age of the West Indian volcanic foundation, Spencer, 1153.
- Geological features of Azores, Howarth, 617.
- Geological relationship of volcanoes of West Indies, Spencer, 1152.
- Guadeloupe, Sapper, 1064.
- History of the Caribbean Islands, Frazer, 418.
- Inner cone of Mont Pelée, Hovey, 614.
- Insel Grenada, Sapper, 1058.
- Insel Montserrat, Sapper, 1061.
- Insel S. Lucia, Sapper, 1060.
- Inseln Nevis und S. Kitts, Sapper, 1067.
- Krater der Soufrière von St. Vincent, Sapper, 1066.
- Manganese deposits of Santiago, Speneer, 1151.
- Martinique, Sapper, 1065.
- Martinique and St. Vincent revisited, Hovey, 609.
- Mission de la Martinique, Lacroix, 711, 723.
- Mont Pelé, Hovey, 611.
- Mont Pelée, Jaggar, 633.
- Mont Pelée and tragedy of Martinique, Heilprin, 544.
- Mont Pelée—the eruptions of August 24 and 30, 1902, Heilprin, 548.
- Nature of phenomena of eruption of Mont Pelée, Divers, 306.
- New cone of Mont Pelé, Hovey, 608.
- Obelisk of Mont Pelée, Heilprin, 547.
- Obelisk of Mont Pelé, Hovey, 612.
- Obelisk of Montagne Pelée, Heilprin, 546.
- Observations minéralogiques faites sur les produits de l'incendie de Saint-Pierre, Lacroix, 717.
- Observations sur les éruptions volcaniques, Lacroix, 714.
- Pelé obelisk, Russell, 1052.

West Indies—Continued.

- Pelée's obelisk, Argall, 35.
 Recent tuffs of the Soufrière, Howe, 618.
 Recent volcanic eruptions, Anderson, 30.
 S. Eustatius und Saba, Sapper, 1063.
 St. Vincent, Sapper, 1059.
 Secondary phenomena of West Indian volcanic eruptions, Curtis, 255.
 Volcanic action and the West Indian eruptions of 1902, Lobley, 807.
 Volcanic dust of Mont Pelée, Griffiths, 487.
 Volcanic eruptions in the West Indies, Anderson, 31.
 Volcanoes of Caribbean Islands, Hovey, 613.
 West Indian eruptions of 1902, Curtis, 256.
 West Indian volcanic eruptions, Milne, 911.

West Virginia.

- Anthracite coal field west of Washington, White, 1298.
 Anthracite of Third Hill Mountain, Griffith, 486.
 Appalachian coal field, White, 1301.
 Clays of the United States, Ries, 1024.
 Charbons gras de la Pennsylvanie et de la Virginie occidentale, Heurteau, 559.
 Drainage modifications in Ohio, West Virginia, and Kentucky, Tight, 1203.
 Lower Carboniferous of Appalachian basin, Stevenson, 1182.
 Properties of Summit Coal Company in Marshall County, Von Rosenberg, 1250.
 Slate industry at Martinsburg, Dale, 260.
 Steinkohlenggebiete von Pennsylvanien und Westvirginien, Simmersbach, 1112.
 Variation and equivalence of the Charleston sandstone, Campbell, 166.

Wisconsin.

- Baraboo iron range, Rohn, 1036.
 Clays of the United States, Ries, 1024.
 Dalles of the St. Croix, Berkey, 74.
 Forest beds of the lower Fox, Lawson, 774.
 Glacial lake Nicolet, Upham, 1229.
 Highway construction in Wisconsin, Buckley, 136.

Wisconsin—Continued.

- Lead and zinc deposits of southwestern Wisconsin, Grant, 475.
 Meteorite from Algoma, Hobbs, 581.
 Paleozoic coral reefs, Grabau, 466.
 Physiography of Wisconsin, Collie, 227.
 Pre-Potsdam peneplain of pre-Cambrian of north-central Wisconsin, Weidman, 1289.
 Soil survey of the Janesville area, Bonsteel, 110.
 Wisconsin zinc fields, Nicholson, 931.

Wyoming.

- Astrodon (*Pleurocœlus*) in the *Atlantosaurus* beds of Wyoming, Hatcher, 509.
 Bonanza, Cottonwood, and Douglas oil fields, Knight and Slosson, 697.
 Coal fields of Uinta County, Knight, 695.
 Fresh-water Tertiaries at Green River, Davis, 288.
 Glaciation in Bighorn Mountains, Salisbury and Blackwelder, 1054.
 Gold production of North America, Lindgren, 802.
 Hartville folio, Smith, 1138.
 Laramie cement plaster, Slosson and Moudy, 1120.
 Leucite hills of Wyoming, Kemp, 674.
 Leucite hills of Wyoming, Kemp and Knight, 677.
 Mineral resources of Encampment copper region, Spencer, 1149.
 Platinum in copper ores in Wyoming, Emmons, 375.
 Platinum in the Rambler mine, Kemp, 666.
 Rare metals in ore from Rambler mine, Read, 1000.
 South Pass gold district, Fremont County, Beeler, 65.
 Triassic and Jurassic strata of the Black Hills, Hovey, 616.
Miscellaneous (not indexed elsewhere).
 Elements of geology, Le Conte, 781.
 Evolution of climates, Manson, 838.
 Method of facilitating photography of fossils, Van Ingen, 1239.

